ACCELERATED ACADEMIC CALENDAR FOR SECONDARY CLASSES

Education systems in most countries have been adversely affected by COVID-19, and has prompted widespread country-wide school closures and physical distancing measures, likewise in Pakistan, and specifically in Khyber Pakhtunkhwa province. The schools remained closed till 15th September 2020. This implies that approximately more than 5 million children in KP lost touch with teaching learning for approximately 6 months; though a small number of students did have access to online and other alternative learning modalities, yet the major portion remained detached from the regular teaching learning process.

Talking specifically of KP, for an enhanced education system-level response to the pandemic, The Elementary & Secondary Education Department, Government of Khyber Pakhtunkhwa undertook substantial steps to ensure continuity of learning in an equitably. Online content was made available, with of course low coverage of students. An important step taken by the E&SED KP is the Development of Accelerated Academic Calendar for the secondary grades one to 8 was also undertaken to serve as accelerated pacing guides for teachers to conduct Catch Up classes, bridging the lost teaching time, enabling them to complete courses in a short time. The initiatives have received much recognition and appreciation.

The Boards of Intermediate and Secondary Education in Khyber Pakhtunkhwa and other stakeholders highlighted the need for the development of Accelerated Academic Calendar (ACC) at the Secondary level classes i.e. 9th and 10th. These classes have also suffered in terms of time lost, the same way as the lower grades. The students are at the decisive entry point in pursuit of their academic career as they have to appear for the Board Examination. For this academic session, the teaching learning time available is less than the normal routine.

Since this is a critical and complex level, with a complicated vertical and horizontal alignments and closely knit progression of the course contents in each subject, it cannot be left to the teachers to pick and choose the topics to be dropped or taught to the students. There is a need for carefully and technically reviewing the course contents, and the Academic Calendar, by the Subject Experts, and decide the selection of Content to be taught to students in the shortened time period, without disturbing its alignment.

As this is high stake intervention, which will enable the teachers to make effective and efficient use of the time available and cover all the essential course contents, and help students to be able to show good performance in summative assessment and examination, after receiving structured guidance from the teachers. It will be mandatory for BISE set the papers for annual exam 2020-21 on the bases of content/topics that Accelerated Academic Calendar (AAC) on the topics/contents mentioned in the AAC for the session 2020-2021.

ہدایات برائے اساتذہ کرام

1۔ یہ تعلیمی کیلنڈر COVID-19 کی وبا کی وجہ سے صرف 21-2020 کے لیے استعمال کیا جائے گا۔ اگلے تعلیمی سال سے تدریسی عمل حسب معمول ہو گا۔

2۔ صرف اس تعلیمی کیلنڈر میں شامل تصورات، عنوانات، ذیلی عنوانات اور عملی کام ہی کا مواد پڑھایا جائے گا۔

3۔ درسی کتاب میں موجود مشقوں کے صرف وہی سوالات کروائیں جو اس تعلیمی کیلنڈر میں شامل مواد پر مبنی ہیں۔

4۔ جن مضامین کے ساتھ عملی کام (Practical) لازمی ہیں، ان میں سماجی فاصلے کا خیال رکھا جائے۔

5۔ تمام درسی مواد میں جہاں کہیں بھی حضور پاک صلی اللہ علیہ وسلم کا اسم مبارک آجائے تو اس کو رسول اکرم خاتم النبیین محمد رسول اللہ صلی اللہ علیہ وآلہ وسلم لکھا اور پڑھا جائے۔

ہدایات برائے سالانہ پرچہ جات

- بورڈ کے سالانہ امتحانات پرچہ برائے 21-2020 اسی تعلیمی کیلنڈر میں دیے گئے مواد (Content) پر ہی مشتمل ہوں گے۔

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PREFACE

The Directorate of Curriculum and Teacher Education Khyber Pakhtunkhwa Abbottabad has undertaken the development of Accelerated Academic Calendar as part of the overall response to the COVID-19 pandemic. The school year 2020-21 has been shortened considerably due to the closures of schools resulting from the outbreak. Therefore, it is imperative that schools shall implement an academic calendar designed to ensure coverage of all essential skills related to knowledge, skills and attitudes in a shortened academic year. This Accelerated Academic Calendar (AAC) will provide the schools and students with a roadmap of learning for the academic year 2020-21 only. It will also provide the teachers with the guidelines to implement the AAC and will provide base for annual examination of SSC 2021 and I am confident that we will succeed in ensuring continuity of learning for our children in these difficult circumstances.

With this, I thank everyone who contributed to the development of AAC, particularly the DCTE subject experts and the team of working teachers, they put together for this task. I must extend my thanks to the BISE Peshawar for the continous support throughout this process and in completion of the task.

Gohar Ali Khan

Director
Curriculum and Teacher Education
Khyber Pakhtunkhwa, Abbottabad

Directorate of Curriculum and Teacher Education
Khyber Pakhtunkhwa, Abbottabad.

Phone #:0992-382634. Fax #:0992-381527. E-mail: dcte-kpk@hotmail.com

Dated Abbottabad the, 15.09.2020.

Notification

No.3898-3906/AD(C&TR): In exercise of the power conferred upon him under the Khyber Pakhtunkhwa Supervision of Curricula, Textbooks and Maintenance of Standard of Education Act. 2011, and consequent upon the recommendations of the subject experts notified vide this Directorate order No: 3795-99/AD(C&TR) dated: 02/09/2020, the Directorate of Curriculum & Teacher Education Khyber Pakhtunkhwa Abbottabad being Competent Authority, is pleased to notify the Accelerated Academic Calendar for Grades IX-X for the Academic Calendar year 2020-21 only.

2. All Boards of Intermediate and Secondary Education Khyber Pakhtunkhwa shall follow the Accelerated Academic Calendar of Grades IX-X for the S.S.C Examination session 2020-21 only.

DIRECTOR

Endst: of even No. & date.

Copy for information to:

1. The Secretary to Govt; of Khyber Pakhtunkhwa Elementary & Secondary Education Department, Civil Secretariat Peshawar.

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			2. Summary writing, Activity B, page 81.		
		Grammar	1. Preposition (Activity A given at Pages # 82 2. Prepositional phrase & prepositional clause Activities B, C & D are at page 82 & 83.	• Revise preposition and give it as home assignment. • Explain prepositional phrase a prepositional clause in the class and assign activity D as homework and carryout other activities B & C in the class.	
09	The Fantastic Shoemaker	**Comprehension**	1. Reading of the Unit Text. 2. Short Question given at page 89. 3. MCQs Activity B given at page 89.	• After carrying out various pre-reading / while reading strategies, teacher will read the given text aloud. • Ask comprehension questions and help students write the answers in their notebooks. • MCQs can be assigned for Homework.	
		Vocabulary	1. Find direct quotation from the text, Activity 'A' given at page # 90	• Activity 'A & B' can be given as Homework. • Help students to find out the meaning of given page at page 90 and write them on	

			n Question Activity A given at page 78. 3. MCQs Activity B given at page 78-79.	• MCQs can be assigned for Homework.	
		Vocabulary	Use of Dictionary 1. Glossary given at page 77. 2. Figure of Speech given at page # 79 & 80. 3. Connotation & Denotation given at page 80. 4. Identification of Literary Devices, Page # 81.	• Help the Students to understand vocabulary of the poem with the help of glossary. • Explain and help the students identify metaphor, imagery and personification in activity C. • Explain and help the students understand activity A. • Assign activity D at page 81 as homework.	
		Writing	Paragraph writing 1. Paraphrase Writing Activity "A" given at page 81	• Explain how to write paraphrase and summary of the poem in the notebook. • Assign paraphrase writing as homework.	

			3. MCQs activity B, page 69 & 70		
		Vocabulary	1. Use of Dictionary for group of words given at page 70.	• Help students to find the difference between given pairs. • Assign Activity-B as Home work.	
		Writing	1. Paragraph writing activity "A" given at page 71. 2. Paragraph comprehension Activity D, page 71	• Discuss the given mind map and ask students to write the given paragraph as Homework. • Help the students regarding activity D.	Writing Activities 'B' & 'C' are relevant to Grade-X Activity C is indirectly achieved in short question.
		Grammar	1.Adverb & adverbials (Activity A & B given at Pages # 72-73 3. Adverbial phrase & Adverbial clause page 74 (Activities D & E)	• Revise the use of adverbs with students and assign activity A & B as homework. • Also explain activity 'C' at page 73. • Discuss and help students in activity D & E.	
08	Hope is the thing with Feathers	**Comprehension**	1. Recitation of the Poem 2. All comprehensio	• The Teacher will recite the poem. • Ask comprehension questions and help students write the answers in their notebooks.	

05	The Madina Charter	**Comprehension**	1. Reading of the Unit Text. 2. Short Questions Activity "A" given at page 45. 3. MCQs Activity "B" given at page 46.	• During content reading (while reading) short questions, may be asked for the purpose of formative assessment. • Ask comprehension questions (post reading) and help students write the answers in their notebooks. • MCQs can be assigned for Homework.	Activity "C" given at page 46 may be skipped as sufficient practice has been done.
		Vocabulary			Exclude vocabulary activity given at page 47.
		Writing	Paragraph Comprehension and writing answering the questions Activity C given at page 47.	• Teacher must explain Activity C in the Class.	Writing Activities A and 'B' may be skipped as the SLO of summary writing can be achieved when writing comprehension answers
		Grammar	1. Present and Past perfect continues Tenses using 'Since & For 'Activities given at Page # 48	• Revise 'Tenses' learnt in earlier grades and explain the use of 'Since & For' in given tenses in the Class.	
07	The Two Bargains	**Comprehension**	1. Reading of the Unit Text. 2. All comprehension Question given at	• After carrying out various pre-reading strategies, teacher will read the given text aloud. • Ask comprehension questions and help students write the answers in their notebooks. • MCQs can be assigned for Homework.	

			Activities given on Pages # 31-32		
4	The Daffodils (Poem)	**Comprehension**	1. Recitation of the Poem. 2. Short Questions Activity "A" given at page 36. 3. MCQs Activity "B" given at page 36.	• Recite the poem aloud paying attention to the rise and fall so that students could enjoy the rhyme and rhythm of the verses. • Ask comprehension questions and help students write the answers in their notebooks. • MCQs can be assigned for Homework.	
		Vocabulary	1. Use of Dictionary to deduce the meaning of difficult words Activities 'A'&'B' and 'C' given at page 37.	• Help students in carrying out Activities 'B' and 'C' in the Class. • Assign Activity 'A' for Homework.	
		Writing	1. Summary writing and Paraphrasing the poem Activities given at page 37-38	• Teacher must explain the concept of paraphrase. • Teacher must explain the concept of summarizing skills in the class.	
		Grammar	1. Correct form of Verb. 2. Infinitive and infinitive phrase, 3. Gerunds and Gerund phrases, Activities given at Pages # 39-40	• Revise and explain these topics in the class and assign Activity A and B as Homework.	

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		Grammar	1. Pronoun and types of Pronoun, Activities A, B and C are given at Page 21-22. 2. Anaphoric and Cataphoric Reference, given at page 22 and 23.	• Revise the types of pronouns and assign activity A, B and C as Homework. • Explain the concept of anaphoric and Cataphoric reference and assign the relevant activity for Homework.	
03	Quaid – A Great Leader	**Comprehension**	1. Reading of the Unit Text. 2. Short Questions Activity "A" given at page 28. 3. MCQs Activity "B" given at page 28.	• After carrying out various pre/while reading strategies, teacher will read the given text aloud. • Ask comprehension questions (post reading) and help students write the answers in their notebooks. • MCQs can be assigned for Homework.	Activity "D" given at page 29 may be skipped as sufficient practice has been done.
		Vocabulary	1. Use of Dictionary to find out the antonyms, Activity "F" given at page 29.	• Help students to look up the antonyms in a dictionary and assign Activity-F as Home work.	Exclude Identify the parts of speech Activity "E" given at page 29 as practice done in Unit#1.
		Writing	1. Translate sentences into Urdu, Activity "J" given at page 30.	• Activity "J" can be given as Home assignment.	Writing Activities 'G', 'H' & 'I' at page No: 29 - 30 may be skipped as essay writing will be dealt in Grade-X
		Grammar	1. Article, Verbs and types of Verb,	• Revise Articles and types of verb in the class. Activities "A","B","C" and "D" can be assigned as Homework.	

					practice has been done in other writing activities.
		Grammar	1. Noun and types of Noun (Countable & uncountable concrete, abstract, collective) 2. Activities-A to F and 'Noun Phrase' given at Pages # 09-11	• Revise the types of nouns and assign the activity as Homework. • Explain 'Noun Phrase 'and assign the activity for Homework.	
2	Iqbal Message to Youth	**Comprehension**	1. Reading of the Unit Text. 2. Short Questions Activity "A" given at page 16. 3. MCQs Activity "B" given at page 17.	• After carrying out various pre-reading strategies, teacher will read the given text aloud. • Ask comprehension questions and help students write the answers in their notebooks. • MCQs can be assigned for Homework.	Activity 'C' making sentences at page 17 may be skipped because these words have already been used in writing answers to comprehension questions.
		Vocabulary	1. Prefixes and suffixes given at pages 18.	• Help students to understand 'prefixes' and 'suffixes' • Activities "A" and "B" given at page 19 should be given as home works.	
		Writing	1. Paragraph writing Activity "C" & 'D' given at page 20.	• Help students in framing 'mind map' for writing and ask them to write the given paragraph as Homework. • Also assign activity "D" as Home work.	

English Grade-IX

Unit No.	Topic	Language Skill	Selected Content/Exercise Questions	Teacher's Guidelines	Rationale For excluded Exercise(s)Questions
01	Hazrat Muhammad (رسولِ اکرم خاتم النّبیین محمّد رسول اللہ ﷺ) the Model of Tolerance	**Comprehension**	1. Reading of the Unit Text. 2. Short Questions Activity "A" given at page 6. 3. MCQs Activity "B" given at page 6-7.	• After carrying out various pre-reading strategies, teacher will read the given text aloud. • Ask comprehension questions and help students to write the answers in their notebooks. • MCQs can be assigned for Homework.	
		Vocabulary	Use of Dictionary to: 1. Identify the parts of speech of the word through abbreviation used, Activity "A" given at page 7. 2. Find out the synonyms, Activity "B" given at page 7.	• Help students to identify the parts of speech of the given words. • Assign Activity-B as Home work.	.
		Writing	1. Paragraph writing Activity "A" given at page 8.	• Help students in framing 'mind map' for writing and ask them to write the given paragraph as Homework.	Writing Activities 'B' & 'C' at page 8 may be skipped as sufficiently

GRADE IX

English

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		مذکر / مونث	قواعد / گرامر	گھر کے کام کے طور پر تفویض کریں۔	طلبہ یہ تصور پچھلی جماعتوں میں سیکھ چکے ہیں
۵	قومی اتفاق	عبارت خوانی	تفہیم	طلبہ سے عبارت خوانی کروائیں، تلفظ پر خصوصی توجہ دیں اور خاص الفاظ کی تفہیم کروائیں۔	
		تفہیمی سوالات		سوال نمبر ۲ تا ۶ کے جوابات طلبہ سے لکھوائیں۔	
		تلخیص کرنا / خلاصہ لکھنا		خاص نکات کی تفہیم کروا کر طلبہ سے سبق کا خلاصہ لکھوائیں۔	
		سیاق و سباق کے حوالے سے عبارت کی وضاحت		مشق میں دی گئی عبارت کی سیاق و سباق کے حوالے سے وضاحت کریں اور طلبہ کو مشق کے طور پر سبق سے کوئی بھی عبارت گھر کے کام کے طور پر دیں۔	
		متن کے حوالے سے خالی جگہ پُر کرنا۔		گھر کے کام کے طور پر تفویض کریں۔	طلبہ متن پڑھ چکے ہیں۔
		الفاظ کا جملوں میں استعمال	ذخیرہ الفاظ	طلبہ سے الفاظ کا جملوں میں استعمال کروا کر لکھوائیں۔	
		جملہ فعلیہ	قواعد / گرامر	جملہ فعلیہ کی تعریف کریں اور مثالوں سے بنیادی اجزا کی وضاحت کریں۔ تصور کی پختگی کے لیے طلبہ کو جملوں کی مدد سے مشق کروائیں۔	

				نوٹ: درسی کتاب، صفحہ ۱۹ پر دی گئی سرگرمی طلبہ سے مکمل کروائیں۔	
۳	حمد (نظم)	تفہیم	بلند خوانی	طلبہ سے حمد کی بلند خوانی کروائیں۔	
			اشعار کی تشریح	خاص الفاظ کی وضاحت کرتے ہوئے شاعر اور نظم کا حوالہ دے کر طلبہ سے اشعار کی تشریح کروائیں۔	
		اصنافِ نظم	مطلع، مقطع، قافیہ، ردیف اور تشبیہ	اصنافِ نظم (مطلع، مقطع، قافیہ، ردیف اور تشبیہ) کی تعریف کریں اور مثالوں کی مدد سے وضاحت کریں۔	
		نظم کی اقسام	حمد، نعت، منقبت، مناجات، قصیدہ، مرثیہ اور مثنوی	نظم کی اقسام (حمد، نعت، منقبت، مناجات، قصیدہ، مرثیہ اور مثنوی) کی تعریف کروا کر مثالوں کی مدد سے وضاحت کریں۔	
		قواعد / گرامر	الفاظ / متضاد	گھر کے کام کے طور پر تفویض کریں۔	طلبہ یہ تصور پچھلی جماعتوں میں سیکھ چکے ہیں۔
				نوٹ: درسی کتاب، صفحہ ۱۰ پر دی گئی سرگرمی طلبہ سے مکمل کروائیں۔	
۴	غزل (۱) میر تقی میر	تفہیم	بلند خوانی	طلبہ سے غزل کی بلند خوانی اس انداز میں کروائیں کہ نثر اور نظم کا فرق واضح ہو۔	
			تشریح / وضاحت	خاص الفاظ کی وضاحت کرتے ہوئے شاعر کا حوالہ دے کر طلبہ سے اشعار کی تشریح کروائیں۔	

			جملے کے اجزائے ترکیبی	جملے کے اجزائے ترکیبی سکھانے کے لئے طلبہ کو روزمرہ جملوں کی مثالوں سے مشق کروائیں۔	
		نوٹ: درسی کتاب، صفحہ ۱۱ ہدایات برائے اساتذہ پر من و عن عمل کریں۔			
۲	اسلام میں گداگری کی مذمّت	تفہیم	عبارت خوانی	طلبہ سے عبارت خوانی کروائیں، تلفظ پر خصوصی توجہ دیں اور خاص الفاظ کی تفہیم کروائیں۔	
			تفہیمی سوالات	سوال نمبر ۲ تا ۷ کے جوابات طلبہ سے لکھوائیں۔	
			جملے مکمل کرنا (سوال نمبر ۱)	گھر کے کام کے طور پر تفویض کریں۔	طلبہ متن پڑھ چکے ہیں۔
		قواعد / گرامر	واحد / جمع		طلبہ یہ تصورات پچھلی جماعتوں میں سیکھ چکے ہیں۔
			الفاظ / متضاد		
			فعل ناقص	فعل ناقص کی تعریف کریں اور مختلف مثالوں سے وضاحت کریں۔	
			جملہ اسمیہ	جملہ اسمیہ کی تعریف کریں اور مثالوں سے بنیادی اجزا کی وضاحت کریں۔ تصور کی پختگی کے لیے طلبہ کو جملوں کی مدد سے مشق کروائیں۔	
		ذخیرہ الفاظ	الفاظ و تراکیب کا جملوں میں استعمال	طلبہ سے الفاظ و تراکیب کا جملوں میں استعمال کروا کر لکھوائیں۔	

اُردو جماعت نہم

سبق نمبر	عنوان	لسانی مہارت	منتخب مشقی سوالات / سرگرمیاں	معاون ہدایات برائے اساتذہ	استدلال
۱	اخلاقِ نبوی (رسولِ اکرم خاتم النّبیین محمّد رسول اللہ ﷺ)	تفہیم	عبارت خوانی	طلبہ سے عبارت خوانی کروائیں، تلفظ پر خصوصی توجہ دیں اور خاص الفاظ کی تفہیم کروائیں۔	
			تفہیمی سوالات	سوال نمبر ۱ تا ۸ کے جوابات طلبہ سے لکھوائیں۔	
			جملے مکمل کرنا	گھر کے کام کے طور پر تفویض کریں۔	طلبہ متن پڑھ چکے ہیں۔
			سیاق و سباق کے حوالے سے عبارت کی وضاحت کرنا	طلبہ کو سیاق و سباق کے حوالے سے عبارت کی تشریح کرنے کا طریقہ سکھائیں اور مشق میں دی گئی عبارت کی سیاق و سباق کے حوالے سے وضاحت کریں۔	
		قواعد / گرامر	مترادف الفاظ	گھر کے کام کے طور پر تفویض کریں۔	پچھلی جماعتوں میں طلبہ یہ تصور سیکھ چکے ہیں۔

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Urdu

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Composition	Selected Letters/Applications/ Stories	Teacher's Guidelines
	5. Allowing recreational trip of an historical place	• Assign any three selected applications for Homework.
Stories	Write **stories** having the following morals 1. Do good have good 2. Union is strength 3. Slow and steady wins the race 4. Honesty is the best policy 5. All that glitters is not gold	• Revise elements of story with the students explaining how the different events are organized to write a story. • Discuss details of the selected stories with the students and help them to write any three as classwork. • Assign any two selected stories for Homework.

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			Activity B given at page#148. 2. paraphrase Writing Activity D Page 148	• Assign paraphrase writing as homework.	2. Exercises 7 & 8 at page 151 are sufficiently practiced in Unit#12. 3. Activity 'C' at page#148 will be dealt in Grade X.
		Grammar	1. Direct and Indirect speech given at Page # 149. 2. Punctuation marks given at page # 150.	• Teacher must explain all the punctuation marks and assign exercise 1, 2. 3 and 6 at page 150 _ 151 as homework.	

Composition	Selected Letters/Applications/ Stories	Teacher's Guidelines
Letters	**Letter** to: 1. father telling him how COVID-19 affected your studies 2. mother asking about her health 3. uncle paying thanks for gift for success in exam 4. brother advising him to concentrate on studies 5. sister guiding her about choice of a career 6. friend to invite him for trip	• Revise layout of an informal letter with the students and explain how to write different parts of an informal letter. • Discuss body of the selected letters with the students and help them to write any three as classwork. • Assign any three selected letters for Homework.
Applications	**Application** to Principal/Headmaster(Headmistress) for: 1. remission of special fine imposed for coming late to school 2. school leaving certificate to get admission in new school 3. fee concession due to poor financial condition 4. Arranging book fair	• Revise layout of an application and explain how to write different parts of an application. • Discuss body of selected applications with the students and help them to write any three as classwork.

		Grammar	1. Active & Passive voice Activity A & B Page#122 2. Adjective types, degrees & formation of adjectives. Activities A,B,C, D and E Page# 61-62 3. Adjective phrase Activity F & G Page# 63	• Explain the concept of active and passive voice in the class. • Help the students in making writing active & passive voice of present and past tense. • Explain types, degrees and formation of adjective in the class assign activities A,B,C,D and E as homework. • Explain Adjective phrase in the class and help students in doing activities 'F' and 'G'.	The grammar section of the excluded unit 6 is included in this unit as these concepts provide scaffolding.
15	Abou Bin Adhem.	**Comprehension**	1. Recitation of poem. 2. Short Question Activity A given at page 147. 3. MCQs Activity B given at page 147 and 148.	• The teacher will recite the poem in the class. • Ask comprehension questions and help students write the answers in their notebooks. • MCQs can be assigned for Homework.	
		Vocabulary	1. Glossary given at page# 146 2. Activity 'A', 'B' and 'C' given at page # 148.	• Helps students to identify different figures of speech used in the given poem and assign this activity at home assignment. • Activity B should be given as homework.	
		Writing	1. Summary writing	• Explain how to write paraphrase and summary of the poem in the notebook.	1. SLO for activity 'A' page#148 is not mentioned

			and compound sentences, Activity given at page (92-93)		
12	The Old Woman	**Comprehension**	1. Recitation of poem. 2. Short Question given at page 120, activity A. 3. MCQs Activity B given at page 120 & 121.	• The teacher will recite the poem in the class. • Ask comprehension questions and help students write the answers in their notebooks. • MCQs can be assigned for Homework.	
		Vocabulary	Identification of Imagery / simile, activity 'A' given at page 121.	• Help the students to identify simile and assign activity 'A' as homework. • Explain the concept of imagery and also assign it as homework.	The relevant 'B' has been sufficiently practiced in earlier grades.
		Writing	1. Paragraph writing Activity A 2. Summary Writing Activity B Page 121	• Explain how to write paraphrase and summary of the poem in the notebook. • Assign paraphrase writing as homework.	Activity 'C' Essay writing may be excluded as it is related to grade X.

			2. Rewrite five sentences which have adverb. Activity 'B' given at page # 90. 3. Find meaning of the following phrases. Activity 'C' Page # 90	the white board and ask students to make sentences.	
		Writing	Paragraph writing 1. Write a paragraph about how you spend your last weekend. Activity 'C' given at page # 90.	• Explain how to write narrative writing to the students and provide vocabulary for writing given paragraph. • Revise story elements and assign activity B at page 90 (Story Writing) as homework.	Activity 'A' at page 90 is sufficiently practiced earlier.
		Grammar	1. Types of clauses, given at Pages # 91 2. Sentence structure, page 91-92 3. Simple, Compound	• Help students in understanding dependent & independent clause and sentence structure. • Explain simple, compound and complex sentences in the class. • Assign activity (Page#93) as Homework.	

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تفصیلی سوالات (کل نمبر:24)						
لسانی مہارت	وقوفی مہارت			سوالات کی تعداد	نمبر	فی صد
	یاداشت	تفہیم	اطلاق			
نثر		2	1	3	24	37
شاعری (نظم/غزل)		4		4	32	50
قواعد/گرامر			1	1	8	13

جدول برائے وقوفی مہارت

وقوفی مہارت	کل نمبر	فی صد
یاداشت	28	22
تفہیم	79	62
اطلاق	20	16

(نمونہ) مجوزہ تصریحی جدول اُردو برائے جماعت نہم

حصّہ (الف)						
کثیر الانتخابی سوالات (کل نمبر:15)						
لسانی مہارت	وقوفی مہارت			سوالات کی تعداد	نمبر	فی صد
	یاداشت	تفہیم	اطلاق			
نثر	4	3		7	7	47
شاعری	1	1		2	2	13
قواعد/گرامر	3	3		6	6	40
حصّہ (ب)						
تفہیمی/مختصر سوالات (کل نمبر:36)						
لسانی مہارت	وقوفی مہارت			سوالات کی تعداد	نمبر	فی صد
	یاداشت	تفہیم	اطلاق			
نثر	2	3	1	6	24	50
شاعری	--	--	--	--	--	-
قواعد/گرامر	3	3		6	24	50
حصّہ (ج)						

۱۶	سفارش طلب	تفہیم	عبارت خوانی	طلبہ سے عبارت خوانی کروائیں، تلفظ پر خصوصی توجہ دیں اور خاص الفاظ کی تفہیم کروائیں۔	
			تفہیمی سوالات	سوال نمبر ۲ تا ۶ کے جوابات طلبہ سے لکھوائیں۔	
			سیاق وسباق کے حوالے سے عبارت کی وضاحت	مشق میں دی گئی عبارت کی سیاق وسباق کے حوالے سے وضاحت کریں اور طلبہ کو مشق کے طور پر سبق سے کوئی بھی عبارت گھر کے کام کے طور پر دیں۔	
		ذخیرہ الفاظ	الفاظ ومحاورات کا جملوں میں استعمال	مشق میں دیے گئے الفاظ ومحاورات کا طلبہ سے جملوں میں استعمال کروائیں۔	
		قواعد / گرامر	جملے درست کرنا	مشق میں دیے گئے جملے طلبہ سے درست کروائیں۔	
	نوٹ: طلبہ کو بتائیں کہ روداد کسے کہتے ہیں نیز اس کے لکھنے کا طریقہ بھی بتائیں اور درسی کتاب ' صفحہ ۹۹ ' پر دی گئی سرگرمی طلبہ سے مکمل کروائیں۔				
	نوٹ: طلبہ کو ہر سبق کے آغاز میں دی گئی مصنفین / شعراء کے حوالے سے معلومات (مختصر حالاتِ زندگی، اسلوب اور تصانیف) فراہم کریں۔				
	۱۔ اپنے دوست / سہیلی کو خط لکھیں جس میں اُس کو کمپیوٹر کے کسی معلوماتی پروگرام کے بارے میں بتائیں۔ ۲۔ اپنے دوست / سہیلی کو خط لکھیں جس میں اُس کو کسی شادی کی روداد بیان کریں۔ ۳۔ کرونا کے دوران آپ نے کیا احتیاطی تدابیر اختیار کیں۔ اپنے دوست / سہیلی کو خط لکھ کر آگاہ کریں۔ ۴۔ اپنے والد کو اپنی پڑھائی اور ضروریات کے بارے میں خط لکھ کر آگاہ کریں۔			درج ذیل خطوط میں سے کوئی ایک خط امتحانی پرچے میں شامل کریں۔	

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۱۴	آرام و سکون	تفہیم	عبارت خوانی	طلبہ سے عبارت خوانی کروائیں، تلفظ پر خصوصی توجہ دیں اور خاص الفاظ کی تفہیم کروائیں۔	
			تفہیمی سوالات	سوال نمبر ۱ تا ۴ کے جوابات طلبہ سے لکھوائیں۔	
		قواعد / گرامر	مذکر، مؤنث	طلبہ سے مشق میں دیے گئے الفاظ کے جملے بنوا کر مذکر اور مؤنث الگ الگ کروائیں۔	
			محاورہ کی تعریف اور مثالیں	'محاورہ' کی تعریف کریں اور مثالوں سے وضاحت کریں۔ اور طلبہ سے کوئی سے پانچ محاورات کا جملوں میں استعمال کروائیں۔	
	نوٹ: درسی کتاب 'صفحہ ۸۰' پر دی گئی سرگرمی طلبہ سے مکمل کروائیں۔				
۱۵	غزل (۲) بہادر شاہ ظفرؔ	تفہیم	بلند خوانی	طلبہ سے غزل کی بلند خوانی اس انداز میں کروائیں کہ نثر اور نظم کا فرق واضح ہو۔	
			تشریح / وضاحت	خاص الفاظ کی وضاحت کرتے ہوئے شاعر کا حوالہ دے کر طلبہ سے اشعار کی تشریح کروائیں۔	
			تفہیمی سوالات	طلبہ سے سوال نمبر ۷ اور ۸ کے جوابات لکھوائیں۔	
		قواعد / گرامر	مرکبات	گھر کے کام کے طور پر تفویض کریں۔	طلبہ پچھلے اسباق میں سیکھ چکے ہیں۔
		اصنافِ شاعری	کنایہ	'کنایہ' کی تعریف کریں اور اشعار اور جملوں میں طلبہ سے اس کی پہچان کروائیں۔	

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۱۲	غزل(۲) مرزا اسد اللہ خان غالبؔ	تفہیم	بلند خوانی	طلبہ سے غزل کی بلند خوانی اس انداز میں کروائیں کہ نثر اور نظم کا فرق واضح ہو۔	
			تشریح / وضاحت	خاص الفاظ کی وضاحت کرتے ہوئے شاعر کا حوالہ دے کر طلبہ سے اشعار کی تشریح کروائیں۔	
		اصنافِ شاعری	مجازِ مرسل	'مجازِ مرسل' کی تعریف کریں اور مثالوں سے وضاحت کریں۔ تصوّر کی پختگی کے لیے طلبہ کو جملے دے کر بطورِ مشق مجازِ مرسل کی نشان دہی کروائیں۔	
		قواعد / گرامر	الفاظ، متضاد	مشق میں دیے گئے الفاظ کے متضاد طلبہ سے بنوائیں۔	
۱۳	غلام	تفہیم	عبارت خوانی	طلبہ سے عبارت خوانی کروائیں، تلفظ پر خصوصی توجہ دیں اور خاص الفاظ کی تفہیم کروائیں۔	
			تفہیمی سوالات	سوال نمبر ۲ تا ۹ کے جوابات طلبہ سے لکھوائیں۔	
			خالی جگہ پُر کرنا	گھر کے کام کے طور پر تفویض کریں۔	طلبہ متن پڑھ چکے ہیں۔
		ذخیرہ الفاظ	جملوں میں استعمال کرنا	طلبہ سے مشق میں دیے گئے محاورات کا جملوں میں استعمال کروائیں۔	
		نوٹ: درسی کتاب، صفحہ ۷۰ پر دی گئی سرگرمی طلبہ سے مکمل کروائیں۔			

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		نوٹ: درسی کتاب، صفحہ ۴۰ پر دی گئی سرگرمی طلبہ سے مکمل کروائیں۔			
۱۰	حجِ اکبر	تفہیم	عبارت خوانی	طلبہ سے عبارت خوانی کروائیں، تلفظ پر خصوصی توجہ دیں اور خاص الفاظ کی تفہیم کروائیں۔	
			تفہیمی سوالات	سوال نمبر ۲ تا ۶ کے جوابات طلبہ سے لکھوائیں۔	
			خالی جگہ پُر کرنا	گھر کے کام کے طور پر تفویض کریں۔	طلبہ متن پڑھ چکے ہیں۔
			سیاق و سباق کے حوالے سے عبارت کی وضاحت	مشق میں دی گئی عبارت کی سیاق و سباق کے حوالے سے وضاحت کریں اور طلبہ کو مشق کے طور پر سبق سے کوئی بھی عبارت گھر کے کام کے طور پر دیں۔	
		ذخیرہ الفاظ	جملوں میں استعمال	مشق میں دیے گئے الفاظ کا طلبہ سے جملوں میں استعمال کروائیں۔	
		قواعد / گرامر	جملوں کو درست کرنا	گھر کے کام کے طور پر تفویض کریں۔	طلبہ متن پڑھ چکے ہیں۔
		نوٹ: درسی کتاب، صفحہ ۵۱ پر دی گئی ہدایت برائے اساتذہ پر من و عن عمل کریں۔			
۱۱	طلوعِ اسلام (نظم) علامہ محمد اقبال رحمۃ اللہ علیہ	تفہیم	بلند خوانی	طلبہ سے نظم 'طلوعِ اسلام' کی بلند خوانی کروائیں۔	
			اشعار کی تشریح	خاص الفاظ کی وضاحت کرتے ہوئے شاعر اور نظم کا حوالہ دے کر طلبہ سے اشعار کی تشریح کروائیں۔	
		قواعد / گرامر	تخلص	طلبہ کو تخلص / قلمی نام کی تعریف مثالوں سے سمجھائیں۔ تصوّر کی پختگی کے لیے اشعار کی مدد سے طلبہ سے تخلص کی نشان دہی کروائیں۔	

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		ذو معنی الفاظ	قواعد اگ رامر	ذو معنی الفاظ کی تعریف کرتے ہوئے مثالوں سے وضاحت کریں اور تصوّر کی پختگی کے لیے مختلف ذو معنی الفاظ کے فلیش کارڈ بنا کر طلبہ سے جملوں میں استعمال کروائیں۔	
۹	نصوح کا خواب	عبارت خوانی	تفہیم	طلبہ سے عبارت خوانی کروائیں، تلفظ پر خصوصی توجہ دیں اور خاص الفاظ کی تفہیم کروائیں۔	
		تفہیمی سوالات		سوال نمبر ۲ تا ۹ کے جوابات طلبہ سے لکھوائیں۔	
		خالی جگہ پُر کرنا۔		گھر کے کام کے طور پر تفویض کریں۔	طلبہ متن پڑھ چکے ہیں۔
		سیاق وسباق کے حوالے سے عبارت کی وضاحت کرنا		مشق میں دی گئی عبارت کی سیاق وسباق کے حوالے سے وضاحت کریں اور طلبہ کو مشق کے طور پر سبق سے کوئی بھی عبارت گھر کے کام کے طور پر تفویض کریں۔	
		جملوں میں استعمال	ذخیرہ الفاظ	مشق میں دیے گئے الفاظ کا طلبہ سے جملوں میں استعمال کروائیں۔	
		خط لکھنا	خط نویسی	طلبہ کو خط لکھنے کے اجزا سکھائیں نیز معاشرے میں پھیلی ہوئی برائیوں سے بچنے کی تلقین کرتے ہوئے طلبہ سے اپنے چھوٹے بھائی کو خط لکھوائیں۔	

۷	نعت رسول مقبول ﷺ		اشعار کی تشریح	خاص الفاظ کی وضاحت کرتے ہوئے شاعر اور نظم کا حوالہ دے کر طلبہ سے اشعار کی تشریح کروائیں۔	
		اصناف شاعری	استعارہ و تشبیہ	'استعارہ اور تشبیہ' کی تعریف کرتے ہوئے مثالوں سے وضاحت کریں اور طلبہ کو استعارے اور تشبیہ کا فرق سمجھائیں۔ تصوری پختگی کے لیے جملوں اور اشعار میں استعارات اور تشبیہات کی پہچان کروائیں۔	
		نظم کی ہیئت	مثلث، مربع، مخمس اور مسدس	نظم کی ہیئتوں (مثلث، مربع، مخمس اور مسدس) کی تعریف کروا کر مثالوں کی مدد سے وضاحت کریں۔ تصورات کی پختگی کے لیے مختلف 'بندوں' میں طلبہ سے ان کی پہچان کروائیں۔	
۸	غزل (۱) خواجہ حیدر علی آتش	تفہیم	بلند خوانی	طلبہ سے غزل کی بلند خوانی اس انداز میں کروائیں کہ نثر اور نظم کا فرق واضح ہو۔	
			تشریح / وضاحت	خاص الفاظ کی وضاحت کرتے ہوئے شاعر کا حوالہ دے اور طلبہ سے اشعار کی تشریح کروائیں۔	
			مصرعے مکمل کرنا	(الف) تا (ج) طلبہ سے مکمل کروائیں	
			مرکبات	مرکبات کی مختلف اقسام کی وضاحت کریں اور دیے گئے مرکبات کی طلبہ سے پہچان کروائیں۔	

۶	انسان کسی حال میں خوش نہیں رہتا	تفہیم	عبارت خوانی	طلبہ سے عبارت خوانی کروائیں، تلفظ پر خصوصی توجہ دیں اور خاص الفاظ کی تفہیم کروائیں۔	
			تفہیمی سوالات	سوال نمبر ۱ تا ۴ کے جوابات طلبہ سے لکھوائیں۔	
			گھر کے کام کے طور پر تفویض کریں۔	گھر کے کام کے طور پر تفویض کریں۔	طلبہ متن پڑھ چکے ہیں۔
			سیاق و سباق کے حوالے سے عبارت کی وضاحت	طلبہ سے سیاق و سباق کے حوالے سے مشق میں دی گئی عبارت کی وضاحت کروائیں۔	
		ذخیرہ الفاظ	الفاظ کا جملوں میں استعمال	طلبہ کو 'الفاظ کا جملوں میں استعمال' گھر کے کام کے طور پر تفویض کریں۔	
		قواعد / گرامر	مرکبِ ناقص، مرکبِ تام	'مرکبِ ناقص' اور 'مرکبِ تام' کی تعریف کریں اور مثالوں سے وضاحت کریں۔ تصور کی پختگی کے لیے طلبہ کو جملوں میں بطور مشق مرکبِ ناقص اور مرکبِ تام کی پہچان کروائیں۔	
		نوٹ: درسی کتاب 'صفحہ ۳۲' پر دی گئی سرگرمی طلبہ سے مکمل کروائیں۔			
		تفہیم	بلند خوانی	طلبہ سے نعت رسولِ مقبول ﷺ کی بلند خوانی کروائیں۔	

TABLE OF SPECIFICATION FOR ISLAMIYAT GRADE-IX

MCQs				
Unit No	**Name of Unit**	**No. of Questions**	**Marks**	**Total Marks**
1	الجزءالاول	**05**	**01**	**05**
2	الجزءالثالث	**02**	**01**	**02**
3	الجزءالرابع	**03**	**01**	**03**
Total		**10**		**10**
CRQs				
1	الجزءالاول	**02**	**05**	**10**
2	الجزءالثالث	**01**	**05**	**05**
3	الجزءالرابع	**02**	**05**	**10**
Total		**05**		**25**
ERQs				
Unit No	**Name of Unit**	**No. of Questions**	**Marks**	**Total Marks**
1	الجزءالاول	**1/2**	**04**	**04**
2	الجزءالثالث	**1/2**	**04**	**04**
3	الجزءالرابع	**1/2 + 1/2**	**3.5+3.5**	**07**
Total		**02**		**15**

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	۲۔ وضو ۳۔ غسل	اساتذہ کرام طلبہ کو وضو کا طریقہ سکھائیں اور اُن سے عملی طور پر وضو کروائیں۔ اساتذہ کرام طلبہ کو غسل کا مسنون طریقہ سکھائیں نیز غسل کے فرائض بھی سمجھائیں

ہدایات برائے طلبہ واساتذہ

۱۔ اس درسی کتاب میں جہاں بھی حضور پاک ﷺ کا نام مبارک آجائے تو اس کو رسول اکرم خاتم النّبیین محمد رسول اللہ ﷺ لکھا اور پڑھا جائے۔

۲۔ مذکورہ تعلیمی کیلنڈر صرف 2020-21 کیلئے ہے۔ لہٰذا رواں سال اس کیلنڈر کو مدِ نظر رکھتے ہوئے اسلامیات کی درسی کتاب پڑھائی جائے۔

۳۔ اس تعلیمی کیلنڈر میں نصاب کا جتنا حصہ دیا گیا ہے پرچہ اسی میں سے آئے گا۔

۴۔ تعلیمی کیلنڈر میں دیئے گئے درسی مواد سے متعلقہ مشقی سوالات کے جوابات لکھ دیئے جائیں۔

۵۔ سورۃ الانفال اور احادیث مبارکہ پڑھاتے وقت اساتذہ کرام پہلے خود صحیح تلفظ کے ساتھ پڑھیں اور پھر چند ایسے طلبہ سے پڑھوائیں جن کی قرأت اچھی ہو۔

۶۔ قرآن کریم کی آیات اور احادیث مبارکہ کی تشریح کرتے وقت غیر متعلقہ اور لمبی چوڑی بحث سے اجتناب کیا جائے۔

۷۔ تعلیمی کیلنڈر میں مختص شدہ نصاب کو بروقت مکمل کیا جائے تاکہ امتحان کیلئے طلبہ کی تیاری مکمل ہو۔

۸۔ طلبہ گھروں اور مساجد میں روزانہ تلاوتِ قرآن پاک کا اہتمام کریں تاکہ نصاب میں دیئے گئے ناظرہ قرآن کا حصہ بروقت مکمل ہو۔

۹۔ جہاں تک ہو سکے اختلافی نکات اور مسائل سے اجتناب کریں۔

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	حدیث نمبر ۹	اساتذہ کرام طلبہ کے درمیان حقوق العباد و فرائض منصبی پر ایک مباحثہ کروائیں۔
	حدیث نمبر ۱۰	اساتذہ کرام طلبہ سے اس حدیث کو مع ترجمہ یاد کروائیں
الجزء الرابع	قرآن مجید ۱۔ تعارف ۲۔ حفاظت ۳۔ فضائل	اساتذہ کرام طلبہ کو قرآن کریم کے تعارف، حفاظت اور فضیلت کے بارے میں ایک آیت کریمہ یا حدیث مبارک سنا کر یاد کروائیں۔
	اللہ تعالیٰ اور اس کے رسول ﷺ کی محبت و اطاعت ۱۔ اللہ تعالیٰ کے ساتھ محبت ۲۔ رسول اکرم خاتم النبیین محمد رسول اللہ ﷺ کے ساتھ محبت و اطاعت ۳۔ ختم نبوت	اساتذہ کرام طلبہ کو اللہ تعالیٰ اور اُسکے رسول صلی اللہ علیہ والہ وسلم کی محبت و اطاعت اور ساتھ ہی ختم نبوت کے ضمن میں قرآن پاک کی ایک ایک آیت اور ایک ایک حدیث کا حوالہ ضرور دیں اور ہوم ورک کے طور پر اُن کو مشقی سوالات 1، 2 اور 3 کے جوابات لکھنے کو کہیں۔
	علم کی اہمیت، فضیلت ۱۔ علم کی اہمیت، ۲۔ علم کی فضیلت	درسی کتاب میں علم کی اہمیت و فرضیت کے حوالے سے جو قرآنی آیات اور احادیث دیئے گئے ہیں وہ طلبہ سے مع ترجمہ یاد کروائیں اور ہوم ورک کے طور پر مشقی سوالات ۲، ۱، اور ۳ کے جوابات لکھنے کو کہیں۔
	طہارت اور جسمانی صفائی ۱۔ طہارت	طہارت سے متعلق ایک قرآنی آیت اور ایک حدیث مبارکہ طلبہ سے یاد کروائیں۔

	سورۃ الانفال آیات ۷۰ تا ۷۵	اساتذہ کرام طلبہ کو بتائیں کہ کس طرح انصار مدینہ نے مہاجرین مکہ کی مدد کی جو بعد میں مؤاخات کے نام سے مشہور ہوئی۔ آیات کا ترجمہ و مفہوم بھی سمجھائیں۔
من ھَدْیِ الحدیث الجزء الثالث	حدیث نمبر ۱	اساتذہ کرام با آواز بلند حدیث مبارکہ صحیح تلفظ کے ساتھ پڑھیں نیز حدیث کا لغوی اور اصطلاحی معنی بیان کریں۔
	حدیث نمبر ۲	اساتذہ کرام طلبہ کو علم کی لغوی اور اصطلاحی معنی سمجھائیں اور طلبہ سے علم کی اہمیت اور فضیلت کے عنوان پر مضمون لکھوائیں
	حدیث نمبر ۳	ساتذہ کرام طلبہ کو تفصیل سے سمجھائیں کہ کس طرح قرآن کریم ہمارے لئے مشعل راہ بن سکتی ہے۔ ترجمہ و تشریح بھی سکھائیں۔
	حدیث نمبر ۴	اساتذہ کرام طلبہ کو درود شریف کی فضیلت بیان کرتے ہوئے بتائیں کہ جہاں بھی حضور پاک صلی اللہ علیہ والہ وسلم کا نام مبارک لیا جائے تو ضرور درود شریف پڑھیں اور بتائیں کہ کثرت درود حُبِ الٰہی اور شفاعتِ رسول اکرم خاتم النبیین محمد رسول اللہ صلی اللہ علیہ والہ وسلم کا ذریعہ بن سکتی ہے۔
	حدیث نمبر ۵	اساتذہ کرام طلبہ کو بتائیں کہ دنیاوی واخروی کامیابی کا راز اتباع سنت میں پوشیدہ ہے وضاحت کیلئے چند مثالیں پیش کریں۔
	حدیث نمبر ۶	اساتذہ کرام مذاکرہ کے ذریعے طلبہ کو یہ بات ذہن نشین کرائیں کہ چھوٹوں پر رحم کرنا اور بڑوں کا احترام کرنا کامیابی کا زینہ ہے۔ اُسوہ حسنہ سے چند مثالیں پیش کریں۔
	حدیث نمبر ۷	اساتذہ کرام طلبہ کو بتائیں کہ رشوت خوری سے کونسے اخلاقی اور معاشرتی مسائل جنم لیتے ہیں۔ حدیث کا ترجمہ و تشریح بھی سکھائیں
	حدیث نمبر ۸	اساتذہ کرام طلبہ کو حضور صلی اللہ علیہ والہ وسلم کے اُسوہ حسنہ سے حسن اخلاق کے بارے میں چند واقعات سنائیں۔

اسلامیات (لازمی) برائے جماعت نہم

باب نمبر	عنوان	ہدایات برائے اساتذہ کرام
من ھَدیِ القرآن الکریم الجزء الاول	سورۃ الانفال آیات ۱ تا ۱۰	آیات میں جن دو گروہوں کا تذکرہ ہوا ہے اُن کا تفصیلی جائزہ پیش کریں نیز مومنوں کے جو صفات بیان ہوئے ہیں وہ نکات کی صورت میں طلبہ سے لکھوائیں
	سورۃ الانفال آیات ۱۱ تا ۱۹	اِن آیات کو صحیح تلفظ کے ساتھ مع ترجمہ اساتذہ کرام پہلے خود پڑھیں اور پھر چند طلبہ سے پڑھوائیں۔ اس کے بعد انکا مفہوم سمجھائیں
	سورۃ الانفال آیات ۲۰ تا ۲۸	اِن آیات میں شر الدوآب کے مفہوم کو واضح کریں اور خیانت سے بچنے کی تدابیر بیان کریں۔
	سورۃ الانفال آیات ۲۹ تا ۳۷	رموزِ اوقاف کو مد نظر رکھتے ہوئے ان آیات کو مع ترجمہ و مفہوم اساتذہ خود پڑھیں اور پھر چند طلبہ سے پڑھوائیں نیز ان آیات میں تقویٰ کی جو اہمیت بیان کی گئی ہے طلبہ کو ذہن نشین کروائیں۔
	سورۃ الانفال آیات ۳۸ تا ۴۴	اساتذہ مالِ غنیمت کی تقسیم کے بارے میں احکام اور مصارف کی پہچان کروائیں۔ نیز آیات کا ترجمہ و مفہوم بھی سکھائیں۔
	سورۃ الانفال آیات ۴۵ تا ۴۸	اساتذہ طلبہ سے ثابت قدمی، صبر و تحمل، ذکر الٰہی اور اطاعت رسول صلی اللہ علیہ والہ وسلم پر ایک جامع نوٹ لکھوائیں
	سورۃ الانفال آیات ۴۹ تا ۵۸	اساتذہ کرام طلبہ کو وعدہ خلافی اور اللہ تعالیٰ کے احکامات کی نافرمانی کے نقصانات سے آگاہ کریں۔ آیات کا ترجمہ و مفہوم بھی سمجھائیں
	سورۃ الانفال آیات ۵۹ تا ۶۴	درج ذیل الفاظ کو مع ترجمہ خوش خط لکھوائیں اور اُن پر طلبہ سے اعراب بھی لگوائیں۔ ترجمہ و مفہوم بھی سمجھائیں۔ من قوۃ۔ من رباط الخیل ترھبون بہ عدو اللہ
	سورۃ الانفال آیات ۶۵ تا ۶۹	اساتذہ کرام طلبہ کو مشورہ کی اہمیت سمجھائیں

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تفصیلی سوالات (کل نمبر:24)						
لسانی مہارت	وقوفی مہارت			سوالات کی تعداد	نمبر	فی صد
	یاداشت	تفہیم	اطلاق			
نثر		2	1	3	24	37
شاعری (نظم/غزل)		4		4	32	50
قواعد/گرامر			1	1	8	13

جدول برائے وقوفی مہارت

وقوفی مہارت	کل نمبر	فی صد
یاداشت	28	22
تفہیم	79	62
اطلاق	20	16

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(نمونہ) مجوزہ تصریحی جدول اُردو برائے جماعت نہم

حصّہ (الف)						
کثیر الانتخابی سوالات (کل نمبر:15)						
لسانی مہارت	وقوفی مہارت			سوالات کی تعداد	نمبر	فی صد
	یاداشت	تفہیم	اطلاق			
نثر	4	3		7	7	47
شاعری	1	1		2	2	13
قواعد / گرامر	3	3		6	6	40
حصّہ (ب)						
تفہیمی / مختصر سوالات (کل نمبر:36)						
لسانی مہارت	وقوفی مہارت			سوالات کی تعداد	نمبر	فی صد
	یاداشت	تفہیم	اطلاق			
نثر	2	3	1	6	24	50
شاعری	--	--	--	--	--	-
قواعد / گرامر	3	3		6	24	50
حصّہ (ج)						

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۱۶	سفارش طلب	تفہیم	عبارت خوانی	طلبہ سے عبارت خوانی کروائیں، تلفظ پر خصوصی توجہ دیں اور خاص الفاظ کی تفہیم کروائیں۔	
			تفہیمی سوالات	سوال نمبر ۲ تا ٦ کے جوابات طلبہ سے لکھوائیں۔	
			سیاق وسباق کے حوالے سے عبارت کی وضاحت	مشق میں دی گئی عبارت کی سیاق وسباق کے حوالے سے وضاحت کریں اور طلبہ کو مشق کے طور پر سبق سے کوئی بھی عبارت گھر کے کام کے طور پر دیں۔	
		ذخیرہ الفاظ	الفاظ ومحاورات کا جملوں میں استعمال	مشق میں دیے گئے الفاظ ومحاورات کا طلبہ سے جملوں میں استعمال کروائیں۔	
		قواعد / گرامر	جملے درست کرنا	مشق میں دیے گئے جملے طلبہ سے درست کروائیں۔	
		نوٹ: طلبہ کو بتائیں کہ روداد کسے کہتے ہیں نیز اس کے لکھنے کا طریقہ بھی بتائیں اور درسی کتاب' صفحہ ۹۹' پر دی گئی سرگرمی طلبہ سے مکمل کروائیں۔			
		نوٹ: طلبہ کو ہر سبق کے آغاز میں دی گئی مصنفین / شعراء کے حوالے سے معلومات (مختصر حالاتِ زندگی، اسلوب اور تصانیف) فراہم کریں۔			
			۱۔ اپنے دوست / سہیلی کو خط لکھیں جس میں اُس کو ٹیلی وژن کے کسی معلوماتی پروگرام کے بارے میں بتائیں۔ ۲۔ اپنے دوست / سہیلی کو خط لکھیں جس میں اُس کو کسی شادی کی روداد بیان کریں۔ ۳۔ کرونا کے دوران آپ نے کیا احتیاطی تدابیر اختیار کیں۔ اپنے دوست / سہیلی کو خط لکھ کر آگاہ کریں۔ ۴۔ اپنے والد کو اپنی پڑھائی اور ضروریات کے بارے میں خط لکھ کر آگاہ کریں۔	درج ذیل خطوط میں سے کوئی ایک خط امتحانی پرچے میں شامل کریں۔

۱۴	آرام وسکون		عبارت خوانی	طلبہ سے عبارت خوانی کروائیں، تلفظ پر خصوصی توجہ دیں اور خاص الفاظ کی تفہیم کروائیں۔	
		تفہیم	تفہیمی سوالات	سوال نمبر ا تا ۴ کے جوابات طلبہ سے لکھوائیں۔	
		قواعد / گرامر	مذکر، مؤنث	طلبہ سے مشق میں دیے گئے الفاظ کے جملے بنوا کر مذکر اور مؤنث الگ الگ کروائیں۔	
			محاورہ کی تعریف اور مثالیں	'محاورہ' کی تعریف کریں اور مثالوں سے وضاحت کریں۔ اور طلبہ سے کوئی سے پانچ محاورات کا جملوں میں استعمال کروائیں۔	
		نوٹ: درسی کتاب' صفحہ ۸۰' پر دی گئی سرگرمی طلبہ سے مکمل کروائیں۔			
۱۵	غزل (۲) بہادر شاہ ظفرؔ		بلند خوانی	طلبہ سے غزل کی بلند خوانی اس انداز میں کروائیں کہ نثر اور نظم کا فرق واضح ہو۔	
		تفہیم	تشریح / وضاحت	خاص الفاظ کی وضاحت کرتے ہوئے شاعر کا حوالہ دے کر طلبہ سے اشعار کی تشریح کروائیں۔	
			تفہیمی سوالات	طلبہ سے سوال نمبر ۷ اور ۸ کے جوابات لکھوائیں۔	
		قواعد / گرامر	مرکبات	گھر کے کام کے طور پر تفویض کریں۔	طلبہ پچھلے اسباق میں سیکھ چکے ہیں۔
		اصنافِ شاعری	کنایہ	'کنایہ' کی تعریف کریں اور اشعار اور جملوں میں طلبہ سے اس کی پہچان کروائیں۔	

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۱۲	غزل(۲) مرزا اسد اللہ خان غالبؔ	تفہیم	بلند خوانی	طلبہ سے غزل کی بلند خوانی اس انداز میں کروائیں کہ نثر اور نظم کا فرق واضح ہو۔	
			تشریح / وضاحت	خاص الفاظ کی وضاحت کرتے ہوئے شاعر کا حوالہ دے کر طلبہ سے اشعار کی تشریح کروائیں۔	
		اصنافِ شاعری	مجازِ مرسل	'مجازِ مرسل' کی تعریف کریں اور مثالوں سے وضاحت کریں۔ تصوّر کی پختگی کے لیے طلبہ کو جملے دے کر بطورِ مشق مجازِ مرسل کی نشان دہی کروائیں۔	
		قواعد / گرامر	الفاظ، متضاد	مشق میں دیے گئے الفاظ کے متضاد طلبہ سے بنوائیں۔	
۱۳	غلام	تفہیم	عبارت خوانی	طلبہ سے عبارت خوانی کروائیں، تلفظ پر خصوصی توجہ دیں اور خاص الفاظ کی تفہیم کروائیں۔	
			تفہیمی سوالات	سوال نمبر ۲ تا ۹ کے جوابات طلبہ سے لکھوائیں۔	
			خالی جگہ پُر کرنا	گھر کے کام کے طور پر تفویض کریں۔	طلبہ متن پڑھ چکے ہیں۔
		ذخیرہ الفاظ	جملوں میں استعمال کرنا	طلبہ سے مشق میں دیے گئے محاورات کا جملوں میں استعمال کروائیں۔	
		نوٹ: درسی کتاب، صفحہ ۷۰ پر دی گئی سرگرمی طلبہ سے مکمل کروائیں۔			

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		نوٹ: درسی کتاب، صفحہ ۴۰ پر دی گئی سرگرمی طلبہ سے مکمل کروائیں۔			
۱۰	حجِ اکبر	تفہیم	عبارت خوانی	طلبہ سے عبارت خوانی کروائیں، تلفظ پر خصوصی توجہ دیں اور خاص الفاظ کی تفہیم کروائیں۔	
			تفہیمی سوالات	سوال نمبر ۲ تا ۶ کے جوابات طلبہ سے لکھوائیں۔	
			خالی جگہ پُر کرنا۔	گھر کے کام کے طور پر تفویض کریں۔	طلبہ متن پڑھ چکے ہیں۔
			سیاق وسباق کے حوالے سے عبارت کی وضاحت	مشق میں دی گئی عبارت کی سیاق وسباق کے حوالے سے وضاحت کریں اور طلبہ کو مشق کے طور پر سبق سے کوئی بھی عبارت گھر کے کام کے طور پر دیں۔	
		ذخیرہ الفاظ	جملوں میں استعمال	مشق میں دیے گئے الفاظ کا طلبہ سے جملوں میں استعمال کروائیں۔	
		قواعد / گرامر	جملوں کو درست کرنا	گھر کے کام کے طور پر تفویض کریں۔	طلبہ متن پڑھ چکے ہیں۔
		نوٹ: درسی کتاب، صفحہ ۵۱ پر دی گئی ہدایت برائے اساتذہ پر من وعن عمل کریں۔			
۱۱	طلوعِ اسلام (نظم) علامہ محمد اقبال رحمۃ اللہ علیہ	تفہیم	بلند خوانی	طلبہ سے نظم 'طلوعِ اسلام' کی بلند خوانی کروائیں۔	
			اشعار کی تشریح	خاص الفاظ کی وضاحت کرتے ہوئے شاعر اور نظم کا حوالہ دے کر طلبہ سے اشعار کی تشریح کروائیں۔	
		قواعد / گرامر	تخلص	طلبہ کو تخلص / قلمی نام کی تعریف مثالوں سے سمجھائیں۔ تصوّر کی پختگی کے لیے اشعار کی مدد سے طلبہ سے تخلص کی نشان دہی کروائیں۔	

		قواعد / گرامر	ذو معنی الفاظ	ذو معنی الفاظ کی تعریف کرتے ہوئے مثالوں سے وضاحت کریں اور تصوّر کی پختگی کے لیے مختلف ذو معنی الفاظ کے فلیش کارڈ بنا کر طلبہ سے جملوں میں استعمال کروائیں۔	
۹	نصوح کا خواب	تفہیم	عبارت خوانی	طلبہ سے عبارت خوانی کروائیں، تلفظ پر خصوصی توجہ دیں اور خاص الفاظ کی تفہیم کروائیں۔	
			تفہیمی سوالات	سوال نمبر ۲ تا ۹ کے جوابات طلبہ سے لکھوائیں۔	
			خالی جگہ پُر کرنا۔	گھر کے کام کے طور پر تفویض کریں۔	طلبہ متن پڑھ چکے ہیں۔
			سیاق و سباق کے حوالے سے عبارت کی وضاحت کرنا	مشق میں دی گئی عبارت کی سیاق و سباق کے حوالے سے وضاحت کریں اور طلبہ کو مشق کے طور پر سبق سے کوئی بھی عبارت گھر کے کام کے طور پر تفویض کریں۔	
		ذخیرہ الفاظ	جملوں میں استعمال	مشق میں دیے گئے الفاظ کا طلبہ سے جملوں میں استعمال کروائیں۔	
		خط نویسی	خط لکھنا	طلبہ کو خط لکھنے کے اجزا سکھائیں نیز معاشرے میں پھیلی ہوئی برائیوں سے بچنے کی تلقین کرتے ہوئے طلبہ سے اپنے چھوٹے بھائی کو خط لکھوائیں۔	

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۷	نعت رسولِ مقبول ﷺ		اشعار کی تشریح	خاص الفاظ کی وضاحت کرتے ہوئے شاعر اور نظم کا حوالہ دے کر طلبہ سے اشعار کی تشریح کروائیں۔	
		اصنافِ شاعری	استعارہ، تشبیہ	'استعارہ اور تشبیہ' کی تعریف کرتے ہوئے مثالوں سے وضاحت کریں اور طلبہ کو استعارے اور تشبیہ کا فرق سمجھائیں۔ تصوّر کی پختگی کے لیے جملوں اور اشعار میں استعارات اور تشبیہات کی پہچان کروائیں۔	
		نظم کی ہیئت	مثلث، مربع، مخمس اور مسدس	نظم کی ہیئتوں (مثلث، مربع، مخمس اور مسدس) کی تعریف کروا کر مثالوں کی مدد سے وضاحت کریں۔ تصورات کی پختگی کے لیے مختلف 'بندوں' میں طلبہ سے ان کی پہچان کروائیں۔	
۸	غزل (۱) خواجہ حیدر علی آتش	تفہیم	بلند خوانی	طلبہ سے غزل کی بلند خوانی اس انداز میں کروائیں کہ نثر اور نظم کا فرق واضح ہو۔	
			تشریح / وضاحت	خاص الفاظ کی وضاحت کرتے ہوئے شاعر کا حوالہ دے اور طلبہ سے اشعار کی تشریح کروائیں۔	
			مصرعے مکمل کرنا	(الف) تا (ج) طلبہ سے مکمل کروائیں	
			مرکبات	مرکبات کی مختلف اقسام کی وضاحت کریں اور دیے گئے مرکبات کی طلبہ سے پہچان کروائیں۔	

		2.1.4 Demonstrating a number with terminating and non-terminating recurring decimals on the number line		from daily life, if possible. • Selected course contents are compulsory to teach the students. • Assign examples/ questions of relevant concepts/ topics as homework task.
		2.2 Properties of real numbers 2.2.1 Real Number System 2.2.1.1 Addition Properties 2.2.1.2 Multiplication Properties 2.2.1.3 Distributive property of multiplication over addition 2.2.1.4 Properties of equality of real numbers 2.2.1.5 Properties of inequality of real numbers	Exercise 2.2 (Q.1, 2, 3, 4)	
		2.3 Radicals and Radicands 2.3.1 Concept of radicals and radicands 2.3.2 Difference between radical form and exponential form of an expression 2.3.3 How to transform an expression given in radical form to exponential form 2.3.4 How to transform an expression given in exponential form to radical form	Exercise 2.3 (Q.1, 2, 3, 4)	
		2.4 Laws of exponents/indices 2.4.1 Base, Exponent and Value 2.4.2 Laws of Exponents 2.4.3 Properties of cubes of numbers (a) Cube of a Positive Number (b) Cube of a Negative Number (c) Cube of common fraction	Exercise 2.4 (Q.1, 3, 5)	
		2.5 Complex numbers 2.5.1 Definition of complex number	Exercise 2.5 (Q.1, 2, 3, 4, 6)	

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		1.4.5 Multiplicative Identity of a Matrix 1.4.6 Transpose of a Matrix 1.4.7 Verification of the result $(AB)^t = B^tA^t$		
		1.5 Multiplicative Inverse of a Matrix 1.5.1 Determinant of a Square Matrix 1.5.2 Singular and Non-singular Matrices 1.5.3 Adjoint of a matrix 1.5.4 Multiplicative Inverse of a Matrix 1.5.5 Use of Adjoint Method to calculate Inverse of a non-singular matrix 1.5.6 Verification of the result $AA^{-1} = I = A^{-1}A$ 1.5.7 Verification of the result $(AB)^{-1} = B^{-1}A^{-1}$	Exercise 1.5 (Q.4, 5)	
		1.6 Solution of Simultaneous Linear Equations 1.6.1 Cramer's Rule 1.6.2 Real life problems leading to simultaneous equations	Exercise 1.6 (Q.1, 2, 3, 4)	
			Review Exercise 1 (Q.1)	
2.	**REAL AND COMPLEX NUMBERS**	2.1 Real Numbers 2.1.1 Recall 2.1.2 Decimal Representation of rational and irrational numbers 2.1.3 Depicting real numbers on the number line	Exercise 2.1 (Q.1-12)	• Explain the concept of "real and complex numbers" and relevant topics by giving examples

MATHEMATICS GRADE-IX

Unit No.	Unit Name	Topics/ Sub-Topics	Selected Course Contents	Guidelines for Teacher
1.	MATRICES	1.1 Introduction to Matrices 1.1.1 Matrix 1.1.2 Rows and Columns of Matrix 1.1.3 Order (or dimension) of a Matrix 1.1.4 Equality of two Matrices	Exercise 1.1 (Q.1, 2, 3, 5, 7)	• Explain the concept of matrices and relevant topics by giving examples from daily life, if possible. • Selected course contents are compulsory to teach the students. • Assign examples/ questions of relevant concepts/ topics as homework task.
		1.2 Types of Matrices	Exercise 1.2 (Q.1, 3, 4)	
		1.3 Addition and Subtraction of Matrices 1.3.1 Conformability for Addition/Subtraction of Matrices 1.3.2 Addition and Subtraction of Matrices 1.3.3 Multiplication of a Matrix by a Real Number 1.3.4 Commutative and Associative Laws under Addition 1.3.5 Additive Identity of Matrices 1.3.6 Additive Inverse of a Matrix	Exercise 1.3 (Q.1, 3, 6, 7, 8, 9, 11, 12, 13, 14)	
		1.4 Multiplication of Matrices 1.4.1 Conformability for multiplication of matrices 1.4.2 Commutative Law of Multiplication of Matrices 1.4.3 Associative Law under multiplication 1.4.4 Distributive laws of multiplication over addition	Exercise 1.4 (Q.2, 5, 6, 8, 9, 10, 11, 12)	

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Assessment Weightage of Pakistan Studies Grade –Ix According To (Curriculum, 2006)

SAMPLE: TOS (TABLE OF SPECIFICATION)

Table1. Cognitive abilities assessment weightage in Pakistan Studies Grade –IX Paper

Questions	Knowledge (K)			Understanding (U)			Application (A)		
	Questions	Marks	%	Questions	Marks	%	Questions	Marks	%
MCQs	5	5	50	5	5	50	-	-	-
Short Questions	-	-	-	7	35	100	-	-	-
Long Questions	-	-	-	2	15	66.6	1	7.5	33.3

Table 2. Overall assessment Percentage of (Cognitive Levels)

Cognitive Level	Percentage
Knowledge(K)	13
Understanding(U)	80
Application(A)	7
Total	100

Table 3. Chapter wise assessment weightage in Pakistan Studies Grade-IX Paper

Unit No	Unit	Assessment weightage	MCQs Section-A Marks: 10		Short Questions Section-B Marks:35		Long Questions Section-C Marks:22.5	
			Question	Marks	Questions	Marks	Questions	Marks
1	Ideological Basis of Pakistan	11.36	1	1	1	5	-	-
2	Making of Pakistan	25	3	3	3	15	1	7.5
3	Land and Environment	29.54	3	3	2	10	1	7.5
4	History of Pakistan-I	34.09	3	3	1	5	1	7.5
Total		100	10	10	7	35	3	22.5

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		۱۔ ریاستی اور انتظامی مسائل ۲۔ اثاثہ جات کی تقسیم ۳۔ نہری پانی کا مسئلہ ۴۔ آئین سازی ۵۔ مہاجرین کا مسئلہ ۶۔ جغرافیائی اور دفاعی مسائل ۷۔ معاشی مسائل قرارداد مقاصد 1949ء۔ ۱۔ قرارداد مقاصد کے اہم نکات، ۲۔ قرارداد مقاصد کی اہمیت • آئینی ارتقاء (پہلی بارہ سطور) • جنرل ایوب خان اور 1958ء کا مارشل لاء (پہلی چار سطور) • ایوب خان کے دور حکومت کی اصلاحات ۱۔ زرعی اصلاحات، ۲۔ معاشی اصلاحات، ۳۔ سیاسی اصلاحات ۴۔ معاشرتی اصلاحات • پاک بھارت جنگ 1965ء • 1970ء کے عام انتخابات • مشرقی پاکستان کی علیحدگی کے اسباب	• موضوعات پر گھر کا کام بھی تفویض کریں۔ اس مقصد کے لئے طلبہ کو باقاعدہ عنوان دیں یا سوال دیں تا کہ وہ جواب میں ایسا مواد شامل کریں جس کا سیکھنا اس موضوع کا اصل مقصد ہے مثلاً گھر کا کام دینے کے لئے ایک سوال یہ ہو سکتا ہے: قیام پاکستان کے وقت کون کون سے مسائل درپیش تھے؟ آئین سازی اور مہاجرین کے مسائل کی وضاحت کریں۔

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3	**باب نمبر3** ارض پاکستان	• پاکستان کا محل وقوع • حدود اربعہ • پاکستان کے محل وقوع کی اہمیت • پاکستان کے طبعی خدوخال ۔ پہاڑی علاقے ۔ سطوح مرتفع ۔ میدانی علاقے ۔ ریگستانی علاقے ۔ ساحلی علاقے ماحولیاتی خطرات / ابتلائیں۔ پاکستان کے ماحولیاتی مسائل۔ ۱۔ سیم وتھور کا مسئلہ ۲۔ جنگلات کی کٹائی ۳۔ زرخیز زمین کا صحرا میں تبدیل ہونا۔	• نقشہ جات، گلوب اور تصاویر کی مدد سے ان موضوعات کی تدریس کرائیں۔ • طلبہ کو موضوعات پر معلومات اکٹھی کرنے کیلئے منصوبے دیں۔ مثلاً پاکستان کے پہاڑی علاقوں پر ایک کتابچہ (تقریباً ۴ صفحات پر مبنی) بنائیں۔ جہاں ممکن ہو وہاں تصاویر بھی لگائیں۔
4	**باب نمبر4** پاکستان کی تاریخ)حصہ اوّل(	تعارف۔ • ابتدائی مسائل	• ابتدائی مسائل کی تدریس کے لئے طلبہ کو ایک ایک مسئلے پر کلاس میں بات چیت کرنے کے لئے وقت دیں۔ • موضوعات کو لیکچر اور سوال وجواب کے ذریعے پڑھائیں۔

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مطالعہ پاکستان برائے جماعت نہم

نمبر شمار	باب	عنوانات / ذیلی عنوانات	معاون ہدایات برائے اساتذہ
1	**باب نمبر1** پاکستان کی نظریاتی اساس	• نظریہ کا مفہوم۔ نظریہ کے ماخذ • نظریہ پاکستان کی اساس اور اجزاء ترکیبی • دو قومی نظریہ: ۔ ارتقاء ۔ سرسید احمد خان اور دو قومی نظریہ یہ ۔ مسلم لیگ اور دو قومی نظر • نظریہ پاکستان: علامہ محمد اقبال اور قائداعظم محمد علی جناح کے فرمودات کی روشنی میں	اخبارات کے فیچرز خاص طور پر 14 اگست کی اشاعت سے بچوں میں نظریہ پاکستان اجاگر کریں۔ بحث کے طریقے کے ذریعے طلبہ کی موضوع کی تدریس میں موثر شمولیت یقینی بنائیں۔
2	**باب نمبر2** قیام پاکستان	• قیام پاکستان: تعارف • قرارداد لاہور 1940ء • 46-1945ء کے انتخابات • کابینہ مشن پلان 1946ء • 3 جون 1947ء کا منصوبہ • تقسیم ہندوستان اور پاکستان کا قیام • قیام پاکستان میں قائداعظم محمد علی جناح کا کردار	• طلبہ کو لیکچر کے طریقہ سے پڑھاتے ہوئے سبق کے دوران ان سے موقع کے مطابق سوال کریں۔ اس طرح لیکچر میں طلبہ بھی فعال طریقہ سے شامل ہوں گے۔ • طلبہ کی بھی سوالات پوچھنے کے لئے حوصلہ افزائی کریں۔ • مختلف تصاویر، چارٹس اور اخباری تراشوں کا استعمال بہت مفید ہو گا۔

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Cognilive Level	Percentage (%)	Marks
Knowledge (K)	50%	25
Understanding (U)	40%	20
Application (A)	10%	5
Total	100%	50

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12.	**LINE BISECTORS AND ANGLE BISECTORS**	• Any point on the right bisector of a line segment is equidistant from end points of the segment. • Any point equidistant from the end points of a line segment is on the right bisector of it. • The right bisectors of the sides of a triangle are concurrent. • Any point on the bisector of an angle is equidistant from its arms. • Any point inside an angle, equidistant from its arms, is on its bisector. • The bisectors of the angles of a triangle are concurrent.	Theorems 12.1, 12.2, 12.3, 12.4, 12.5 and 12.6	• Explain the concept of line bisectors, angle bisectors and relevant theorems with the help of real life examples, if possible. • Selected course contents are compulsory to teach the students.
			Review Exercise 12 (Q.1)	
13.	**SIDES AND ANGLES OF A TRIANGLE**	• If two sides of a triangle are unequal in length, the longer side has an angle of greater measure opposite to it. • If two angles of a triangle are unequal in measure, the side opposite the greater angle is longer than the side opposite to the smaller angle. • Triangle Inequality Theorem: The sum of the length of any two sides of a triangle is greater than the length of third side. From a point outside the line, the perpendicular is the shortest distance from the point to the line.	Theorems 13.1, 13.2, 13.3 and 13.4	• Explain the concept of triangle, its sides, angles and relevant theorems with the help of real life examples, if possible. • Selected course contents are compulsory to teach the students.

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		• HL (Hypotenuse-Leg Congruence Theorem): If in the correspondence of two right-angled triangles, the hypotenuse and one side of one are respectively congruent to the hypotenuse and the corresponding side of the other, the triangles are congruent.		real life examples, if possible. • Selected course contents are compulsory to teach the students.
			Review Exercise 10 (Q.1)	
11.	**PARALLELOGRAMS AND TRIANGLES**	• In a parallelogram, ▪ The opposite sides are congruent. ▪ The opposite angles are congruent. ▪ The diagonals bisect each other. • If two opposite sides of a quadrilateral are congruent, then the quadrilateral is a parallelogram. • The Triangle Mid-segment Theorem: The line segment, joining the midpoints of two sides of a triangle, is parallel to the third side and is equal to one-half of its length.	Theorems 11.1, 11.2 and 11.3	• Explain the concept of parallelograms, triangles and relevant theorems with the help of real life examples, if possible. • Selected course contents are compulsory to teach the students.
			Review Exercise 11 (Q.1)	

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		9.1.3 Derivation of Distance formula		formula relevant topics with the help of real life examples, if possible. • Selected course contents are compulsory to teach the students. • Assign examples/ questions of relevant concepts/ topics as homework task.
		9.2 Collinear points 9.2.1 Collinear and non-collinear points 9.2.2 Use of distance formula to show that the given three non-collinear points form: (a) Equilateral triangle (b) Isosceles triangle (c) Scalene triangle (d) Right-angled triangle 9.2.3 Use of distance formula to show that the given four non-collinear points form: (a) Square (b) Rectangle (c) Parallelogram	Exercise 9.2 (Q.1, 3, 4, 5, 6, 7, 8, 9, 10)	
		9.3 Mid-point formula 9.3.1 Application of distance and mid-point formula to solve/verify different standard results related to geometry	Exercise 9.3 (Q.1, 2, 3, 4)	
			Review Exercise 9 (Q.1)	
10.	**CONGRUENT TRIANGLES**	• Converse of the Isosceles triangle theorem: If two angles of a triangle are congruent, then the sides opposite to those angles are congruent.	Theorems 10.2 and 10.4	• Explain the concept of congruent triangles and relevant theorems with the help of

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		(g) Construction of the table for ordered pair of values satisfying a linear equation in two variables (h) Drawing the graph of a linear equation (i) Drawing the graph of the equation of the form $y = c$ (j) Drawing the graph of the equation of the form $x = a$ (k) Drawing the graph of the equation of the form $y = mx$ (l) Drawing the graph of the equation of the form $y = mx + c$		topics as homework task.
		8.2 Conversion of Graphs 8.2.1 Conversion graph of miles in to kilometers 8.2.2 Conversion of hectares into acres 8.2.3 Conversion graph of degree Celsius into degrees Fahrenheit 8.2.4 Conversion graph of Pakistani currency into another currency 8.3 Graphic solution of equation in two variables	Exercise 8.3 (Q.1, 2, 3, 4, 5, 6)	
			Review Exercise 8 (Q.1)	
9.	**INTRODUCTION TO COORDINATE GEOMETRY**	9.1 Coordinate Geometry 9.1.1 Distance Formula between two points in a Cartesian plane 9.1.2 Distance formula	Exercise 9.1 (Q.1, 2)	• Explain the concept of distance formula, mid-point

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			(Q.1, 4, 7, 8)	real life examples, if possible. • Selected course contents are compulsory to teach the students. • Assign examples/ questions of relevant concepts/ topics as homework task.
		7.2 Equations involving Absolute Value 7.2.1 Absolute Value 7.2.2 Solution of Equations Involving Absolute Value in One Variable	Exercise 7.3 (Q.1, 3, 7, 9)	
		7.3 Linear Inequalities 7.3.1 Properties of Inequalities 7.4 Solution of Linear Inequalities with Rational Coefficient 7.4.1 Application of Inequality in Real Life	Exercise 7.4 (Q.2, 3)	
			Review Exercise 7 (Q.1)	
8.	**LINEAR GRAPHS AND THEIR APPLICATIONS**	8.1 Identifying pair of real numbers as an ordered pair 8.1.1 Cartesian plane and their linear graphs (a) Identification of pair of real numbers (b) Recognizing ordered pairs of real numbers through examples (c) Cartesian plane (d) Locating a Point (e) To draw line segment, Triangle, Rectangle, Square and Parallelogram by joining the set of given points	Exercise 8.1 (Q.1, 2, 3, 5, 7, 8)	• Explain the concept of linear graphs and relevant topics with the help of real life examples, if possible. • Selected course contents are compulsory to teach the students. • Assign examples/ questions of relevant concepts/
		(f) A linear equation in two variables	Exercise 8.2 (Q.1, 3, 4, 7, 8)	

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		5.2 Remainder Theorem and Factor Theorem 5.2.1 Remainder Theorem 5.2.2 Zero of a Polynomial 5.2.3 The Factor Theorem 5.3 Factorization of a Cubic Polynomial	Exercise 5.6 (Q.1, 2, 4)	
			Review Exercise 5 (Q.1, 2, 3)	
6.	**ALGEBRAIC MANIPULATION**	6.1 Highest Common Factor and Least Common Multiple 6.1.1 Highest Common Factor (H.C.F) 6.1.2 Least Common Multiple (L.C.M) 6.1.3 Relationship between H.C.F and L.C.M 6.1.4 Application of H.C.F and L.C.M	Exercise 6.1 (Q.1, 2, 3, 5, 6, 7, 8)	• Explain the concept of H.C.F, L.C.M and relevant topics with the help of real life examples, if possible. • Selected course contents are compulsory to teach the students. • Assign examples/ questions of relevant concepts/ topics as homework task.
		6.2 Basic Operations on Algebraic Expressions	Exercise 6.2 (Q.1, 2)	
		6.3 Square Root of Algebraic Expressions	Exercise 6.3 (Q.1, 2, 3)	
			Review Exercise 6 (Q.1)	
7.	**LINEAR EQUATIONS AND INEQUALITIES**	7.1 Linear Equations 7.1.1 Introduction 7.1.2 Solution of Linear Equations with rational Coefficients	Exercise 7.1 (Q.1, 2, 3, 4, 5, 8)	• Explain the concept of linear equations, linear inequalities and relevant topics with the help of
		7.1.3 Solution of Equations involving radicals	Exercise 7.2	

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5.	**FACTORIZATION**	5.1 Factorization 5.1.1 Factorization of expressions of the type $ka + kb + kc$ 5.1.2 Factorization of expressions of the type $ac + ad + bc + bd$ 5.1.3 Factorization of the type $a^2 \pm 2ab + b^2$ 5.1.4 Factorization of the type $a^2 - b^2$ 5.1.5 Factorization of the type $a^2 \pm 2ab + b^2 - c^2$	Exercise 5.1 (Q.1, 3, 5, 8, 10)	• Explain the concept of factorization, remainder theorem, factor theorem and cubic polynomial using factor theorem. • Selected course contents are compulsory to teach the students. • Assign examples/ questions of relevant concepts/ topics as homework task.
		5.1.6 Factorization of the Expression of the Type-I $a^4 + a^2b^2 + b^4$ or $a^4 + 4b^4$	Exercise 5.2 (Q.1, 3, 5, 6, 8, 10)	
		5.1.7 Factorization of trinomials of the Type-II $x^2 + bx + c$ 5.1.8 Factorization of the Type-III $ax^2 + bx + c$	Exercise 5.3 (Q.1, 2, 3, 5, 10, 11)	
		5.1.9 Factorization of the Type-IV $(ax^2 + bx + c)(ax^2 + bx + d) + k$ 5.1.10 Factorization of the Type-IV $(x + a)(x + b)(x + c)(x + d) + k$ 5.1.11 Factorization of the Type-IV $(x + a)(x + b)(x + c)(x + d) + kx^2$ 5.1.12 Factorization of the Type-V $a^3 + 3a^2b + 3ab^2 + b^3$ and $a^3 - 3a^2b + 3ab^2 - b^3$	Exercise 5.4 (Q.1, 3, 5, 6, 9)	
		5.1.13 Factorization of an expression of the Type-VI $a^3 + b^3$ and $a^3 - b^3$	Exercise 5.5 (Q.1, 2, 3, 7)	

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		4.1.10 Value of an algebraic expression at some particular real number	Exercise 4.2 (Q.3, 4, 5)	
		4.2 Algebraic Formulas 4.2.1 Establish the formulas	Exercise 4.3 (Q.1, 4, 5, 6)	
		4.2.2 Derivation of the formula $(a+b+c)^2 = a^2+b^2+c^2+2ab+2bc+2ca$	Exercise 4.4 (Q.1, 2, 3, 4, 5, 6)	
		4.2.3 Derivation of the formulas (i) $(a+b)^3 = a^3+3ab(a+b)+b^3$ (ii) $(a-b)^3 = a^3-3ab(a-b)-b^3$	Exercise 4.5 (Q.1, 2, 3, 4, 5, 8, 9)	
		4.2.4 Derivation of the formula $a^3 \pm b^3 = (a \pm b)(a^2 \pm ab + b^2)$	Exercise 4.6 (Q.2, 3)	
		4.3 Surds and their Application 4.3.1 Surds 4.3.2 Order of a surd 4.3.3 Types of a surd 4.3.4 Conjugate surds 4.4 Rationalization	Exercise 4.7 (Q.1, 2, 3, 5, 8, 10)	
			Review Exercise 4 (Q.1)	

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			(Q.1, 2)	
			Review Exercise 3 (Q.1)	
4.	**ALGEBRAIC EXPRESSIONS AND ALGEBRAIC FORMULAS**	4.1 Algebraic Expressions 4.1.1 Rational Expressions 4.1.2 How to examine whether a given algebraic expression is a: (a) Polynomial or not (b) Rational expression or not 4.1.3 Rational Expressions behave like a rational number 4.1.4 Lowest terms of a rational expression $\frac{p(x)}{q(x)}$ 4.1.5 How to examine whether a given algebraic expression is in its lowest terms or not 4.1.6 Working rule to express a rational expression in its lowest terms 4.1.7 Finding sum and difference of rational expressions 4.1.8 Product of rational expressions 4.1.9 Dividing a rational expression with another and expressing the result in the lowest term	Exercise 4.1 (Q.1, 3, 4, 5, 6, 7)	• Explain the concept of algebraic expressions & algebraic formulas, and relevant topics by giving examples from daily life, if possible. • Selected course contents are compulsory to teach the students. • Assign examples/ questions of relevant concepts/ topics as homework task.

		2.5.2 Conjugate of a complex number 2.5.3 Equality of two complex numbers 2.6 Operation on Complex Numbers		
			Review Exercise 2 (Q.1, 2)	
3.	LOGARITHM	3.1 Scientific Notation 3.1.1 How to write a number x from standard to scientific notation 3.1.2 How to write a number x from scientific to standard notation	Exercise 3.1 (Q.1, 2)	• Explain the concept of scientific notation, logarithm and relevant topics by giving examples from daily life, if possible. • Selected course contents are compulsory to teach the students. • Assign examples/ questions of relevant concepts/ topics as homework task.
		3.2 Logarithm	Exercise 3.2 (Q.1, 2, 3)	
		3.2.1 Defining Common logarithm, Characteristic and Mantissa 3.2.2 The use of logarithmic table to find the log of a number	Exercise 3.3 (Q.1, 3)	
		3.2.3 Anti-logarithm	Exercise 3.4 (Q.2)	
		3.3 Common and Natural logarithm 3.3.1 Difference between common and natural logarithm 3.4 Laws of logarithm	Exercise 3.5 (Q.1, 3)	

Practical	To verify the principle of moments by using a metre rod balanced on a wedge.	
V. Gravitation	• Law of universal gravitation o State and explain law of universal gravitation	• Lecture cum demonstration method • By using Fig.5.1 explain the concept of content.
	• Mass of earth o Calculate the mass of earth	• Apply Lecture cum demonstration method to explain the content.
	• Variation of g o Variation of g with altitude	• By applying Lecture cum demonstration method • Clear the concept by using figure 5.6. • Apply Inquiry approach
	Exercise	Questions and problems in given exercise from above selected Topics should be answered and Solve by teacher or given as home assignments to students.
VI. Work and Energy	• Work o Explanation of work	• Apply Lecture cum demonstration method & Activity Based method • Clear the concept by using figure 6.1, 6.2 along with example 6.1.
	• Energy o Energy , Potential Energy and Kinetic energy	• Apply Lecture cum demonstration & Activity Base method to explain the content. • Derive the equations for Potential Energy and Kinetic energy
	• Power o Explanation of Power	• Apply Lecture cum demonstration and Inquiry method. • Involve the students to solve the example 6.5.
	Exercise	Questions and problems in given exercise from above selected Topics should be answered and Solve by teacher or given as home assignments to students.

	• Uniform circular motion o Centripetal acceleration o Centripetal force	• Demonstration and practice/interactive approach • Using writing board • Link with daily life examples
	Exercise	Questions and problems in given exercise from above selected Topics should be answered and Solve by teacher or given as home assignments to students.
IV. Turning effect of forces	• Addition of forces o Addition of two and more than two forces	• Lecture cum demonstration method use to explain the contents • Explain figures from text book • Involve the student during demonstration on writing board
	• Resolution of force o Explain the Resolution of forces	• Lecture cum demonstration method use to explain the contents • Explain figures from text book • Involve the student during demonstration on writing board
	• Torque o Explanation of Torque	• Lecture cum demonstration method use to explain the contents • Involve the student during demonstration on writing board • Link with daily/classroom practical example
	• Couple o Explanation of couple	• Lecture cum demonstration method use to explain the contents • Involve the student during demonstration on writing board • Link with daily/classroom practical example
	• Equilibrium o Equilibrium/types and their Conditions	• Lecture cum demonstration method use to explain the contents • Involve the student during demonstration on writing board • Link with daily/classroom practical example
	Exercise	Questions and problems in given exercise from above selected Topics should be answered and Solve by teacher or given as home assignments to students.

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	• Scalar and vectors o Scalar quantities o Vectors quantities o Representation of vectors	• Apply lecture cum demonstration Method to explain scalar and vectors • Use of Writing board • Group discussion with students about scalars and vectors from daily life practical examples • Apply inquiry approach
	• Terms associated to Motions o Distance and displacement o Speed and Velocity o Acceleration	• By applying demonstrations/lecture method to explain topics • Performing group activities in class to differentiate the given terms • Clear the concepts of terms by figures given in text book
	• Equations of Motion o Derive the following equations by graph $v_f = v_i +$ at $s = v_i t + \frac{1}{2}at^2$ and $2as = {v_f}^2 - {v_i}^2$	• Apply the demonstration and practice/interactive approach • Apply inquiry approach while deriving equations
	Exercise	Questions and problems in given exercise from above selected Topics should be answered and Solve by teacher or given as home assignments to students.
Practical	To find the value of "g" by free fall method.	
III. Dynamics	• Laws of Motions o Statement / explanation of laws of Motions	• Lecture /demonstration method • Link with daily life examples
	• Linear momentum o Linear momentum o Force and change in momentum	• Apply Lecture /demonstration method • Link with daily life examples
	• Friction o Definition and types of friction o Advantages and disadvantages of frictions o Methods of reducing friction	• Demonstration and practice/interactive approach • Perform Activity to explain the contents • By applying Inquiry approach in group of students • Link with daily life examples

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Physics Grade-IX

Units	Selected contents Topic/sub topic	Tips for teacher
I. Physical Quantities and Measurement	• Introduction to Physics o Definition of Physics and o Role of Physics in other sciences. o Quran and Physics o Contribution to Physical Science by Islamic World	• Explain with help of writing board by involving students • Tell student that Allah is the ultimate creator of this universe by giving them verses from text book • Mini lecture on Muslim scientists in Physical sciences
	• Physical Quantities o Define Physical Quantities o Base Quantities o Derived Quantities o S.I Units	• Link with daily life measurements of Physical quantities along with their units • Group discussion about systems of units used in daily life measurement • Explain table of base and derived units with help of students • Use of A.V Aids
	Exercise	Questions and problems in given exercise from above selected Topics should be answered and Solve by teacher or given as home assignments to students.
Practical	1) To measure the volume of a solid cylinder by measuring length and diameter of a solid cylinder with vernier callipers. 2) To measure the thickness of a metal strip or a wire by using a screw gauge.	
II. Kinematics	• Rest and Motion o Definition of rest and motion with suitable examples o Explain the table 2.1	• Lecture cum demonstration Method • Group discussion with students about rest and Motion with daily life observation • Perform Activities by the students in class related rest and motion

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Physics

Percentage (Cognitive Levels)

Cognitive Level	Percentage
Knowledge	10%
Understanding	20%
Application	70%

Percentage (Difficulty Levels)

Difficulty Level	Weightage
Easy (E)	15%
Moderate (M)	70%
Difficult (D)	15%

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Table of Test Specification (Sample)

S. No.	Unit	Percentage	Section-A		Section-B		Section-C	
			No. of MCQs	Marks	No. of Questions	Marks	No. of Questions	Mark
1	Matrices	10%	1	1	1	4	-	-
2	Real and Complex Numbers	6%	1	1	1	4	-	-
3	Logarithm	5%	1	1	1	4	-	-
4	Algebraic Expressions and Algebraic Formulas	8%	1	1	1	4	-	-
5	Factorization	8%	1	1	1	4	-	-
6	Algebraic Manipulation	5%	1	1	1	4	-	-
7	Linear Equations and Inequalities	5%	1	1	1	4	-	-
8	Linear Graphs and their Applications	5%	1	1	1	4	-	-
9	Introduction to Coordinate Geometry	4%	-	-	-	-	1	8
10	Congruent Triangles	6%	1	1	-	-	1	8
11	Parallelograms and Triangles	6%	1	1	1	4	-	-
12	Line Bisectors and Angle Bisectors	6%	1	1	-	-	1	8
13	Sides and Angles of a Triangle	5%	1	1	1	4	-	-
14	Ratio and Proportion	6%	1	1	1	4	-	-
15	Pythagoras' Theorem	8%	1	1	1	4	-	-
16	Theorems Related with Area	4%	1	1	-	-	-	-
17	Practical Geometry - Triangles	3%	-	-	-	-	1	8
TOTAL		**100%**	**15**	**15**	**12**	**48**	**04**	**32**

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		given.		
		17.2.4 Concurrent lines and point of concurrency 17.2.5 To draw angle bisector of a triangle and to verify their concurrency. 17.2.6 To draw altitude of a triangle and to verify their concurrency. 17.2.7 To draw perpendicular bisectors of a triangle and to verify their concurrency. 17.2.8 To draw medians of a triangle and to verify their concurrency.	Exercise 17.2 (Q.1, 2, 3, 4)	
			Review Exercise 17 (Q.1)	

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16.	**THEOREMS RELATED WITH AREA**	• Parallelograms on the same base and lying between the same parallel lines (or of the same altitude) are equal in area.	Theorem 16.1	• Explain the concept of area of parallelograms and relevant theorem with the help of real life examples, if possible. • Selected course contents are compulsory to teach the students.
			Review Exercise 16 (Q.1)	
17.	**PRACTICAL GEOMETRY - TRIANGLES**	17.1 Elements of a Triangle 17.2 Construction of a Triangle in the following three cases 17.2.1 Case – 1 To construct a triangle, when the length of two sides and measure of the included angle are given. 17.2.2 Case – 2 To construct a triangle, when length of one side and measures of two of its angles are given. 17.2.3 Case – 3 To construct a triangle when length of two of its sides and the measure of an angle opposite to one of these sides is	Exercise 17.1 (Q.1, 2, 3, 4)	• Explain the construction of different triangles practically with the help of instruments on the board. • Selected course contents are compulsory to teach the students. • Assign examples/ questions of relevant concepts/ topics as homework task.

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			Review Exercise 13 (Q.1)	
14.	**RATIO AND PROPORTION**	• If two triangles are similar, then the measures of their corresponding sides are proportional.	Theorem 14.1	• Explain the concept of ratio, proportion and relevant theorem with the help of real life examples, if possible. • Selected course contents are compulsory to teach the students.
			Review Exercise 14 (Q.1)	
15.	**PYTHAGORAS' THEOREM**	• Pythagoras' Theorem: In a right-angles triangle, the square of the length of hypotenuse is equal to the sum of the squares of the length of other two sides. • Converse of Pythagoras' Theorem: If the square of one side of a triangle is equal to the sum of the squares of the other two sides, then the triangle is a right-angled triangle.	Theorems 15.1 and 15.2 Exercise 15.1 (Q.1, 3, 4)	• Explain the concept of right-angled triangles and relevant theorems with the help of real life examples, if possible. • Selected course contents are compulsory to teach the students.
			Review Exercise 15 (Q.1)	

PHYSICAL STATES OF MATTER	Liquid state	• Typical properties of liquid state; • Volume & shape • Evaporation • Factors affecting evaporation; (i) Surface area (ii) Temperature (iii)Inter molecular attractive forces • Vapor pressure • Factors effecting vapor pressure • Freezing point • Diffusion • Mobility • Density	➢ Write typical properties of Liquid on writing board to start the discussion ➢ Ask question from students to clarify their concept. ➢ Assign factors affecting evaporation as homework. ➢ Charts showing the key points of the sub-topics ➢ Initiate discussion by asking questions ➢ Flash cards showing definitions of Freezing point, diffusion, mobility and density ➢ Ask questions from students to clarify the concept ➢ Animation if possible
	Solid state	• Solid • Typical properties of solid	➢ Discuss with students typical properties of solid by writing it on white board and start discussion
	Exercise	• MCQs: i,ii,iv,vi,viii,ix • Short Questions: iii,iv,vi • Long questions: ii (Part-b and c only)	➢ Discussion by asking exercise Questions ➢ Provide corrective feedback to students to clarify the concept
	Practical	• To determine the melting point of naphthalene	➢ Demonstrate the experiments and involve students in the practical
		• To determine the Boiling Point of Ethyl alcohol	➢ Demonstration ➢ Involve students in performing practical
Unit-6	Introduction	• Solution, aqueous solution, solute & solvent	➢ Discuss the solution, aqueous solution, solvent and solute with examples with students by writing on the writing board ➢ Video lecture (if possible)

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STRUCTURE OF MOLECULE	Chemical Bonding	• Ionic Bond	➢ Charts presentation of formation of ionic bond. ➢ Involve students in the discussion by asking questions ➢ Animation if possible
		• Covalent Bond • Single Covalent Bond • Double Covalent Bond • Triple covalent bond • Polar Covalent Bond • Non polar covalent bond	➢ Video lecture (if possible) ➢ Discuss types of covalent bond by writing it on Board ➢ Charts presentation showing polar and Non Polar covalent bond
		• Co-ordinate covalent bond	➢ Discuss the example of Coordinate covalent Bond on writing Board ➢ Homework (test yourself at page 97 of the Textbook of Chemistry Grade IX)
	Exercise	• MCQs: i-x (all) • Short questions: ii,v,vii,viii,ix,x • Long question: i,ii,iii,v (only)	➢ Discussion by asking questions from students
	Practical	• To demonstrate that some chemical reactions absorb energy	➢ Demonstration ➢ Involve students in the demonstration by asking questions from students.
UNIT 5	Introduction of Gases	• Gaseous state • Typical properties of gases	➢ Charts showing the properties of gases to start discussion ➢ Ask question from students to clarify the concept.

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	Isotopes	• Definition • Examples(Only)	➢ Use flash cards for isotopes definition and examples
	Exercise	• MCQs: i,ii,iv,v,vi,vii,ix,x • Short Questions: i,ii,iii,iv,v,vii,viii,ix,x • Long Questions: iii,iv & v	➢ Discuss exercise questions with the students
	Practical	• Separate naphthalene from the given mixture of sand	➢ Demonstrate and involve students in the practical
UNIT 3 PERIODIC TABLE AND PERIODICIY OF PROPERTIES	Modern Periodic table	• Periods • Groups	➢ Discussion by using periodic table. ➢ Charts showing the concept of periods and groups
	Periodicity of Properties	• Atomic size • Ionization energy • Electronegativity	➢ Assign homework to the students "the periodicity in properties of Elements of first three periods". ➢ Mini-lecture by using writing board ➢ Involve students by asking questions
	Exercise	• MCQs: i,ii,iii,iv,v,vi,vii,viii,ix • Short Questions: i-x (all) • Long Question: (ii),(iii) and V(a) & (c) parts only	➢ Discussion ➢ Ask questions from students ➢ Assign the students homework of writing the answers of short questions from vi-x.
	Practical	• To demonstrate that two elements combine to form binary compound.	➢ Demonstration ➢ Discuss the main theme of the Experiment ➢ Involve students in performing experiment
		• To prepare the crystals of Copper Sulphate. ($CuSO_4.5H_2O$ from the given impure sample.	➢ Demonstration ➢ Discuss main points on writing board ➢ Perform the experiment through the involvement of students.
UNIT 4	Introduction Why do atoms form chemical bond?	• Valence concept • Octet theory of valence • Duplet rule • orbital concept	➢ Use writing board for valence concept, octet and duplet rule ➢ Initiate discussion with students by asking question relevant to the above sub-topics.

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	Chemical species	• Ion (cation, Anion)	➢ Use Flash cards for Discussion ➢ Give students Homework of examples of Ions (Cation, Anion)
	Mole and Avogadro's number	• Avogadro number • Mole • Gram Atomic mass • Gram molecular mass • Gram formula mass	➢ Mini lecture by writing key points of the sub-topics ➢ Involve students in the discussion by asking questions ➢ Video (http://youtube.be/OyRhNZfPXpl)
	Exercise	• MCQs: i,ii,iii,iv,v,vi,ix and x • Short Questions: i,ii, iii,iv and ix (Only) • Long Questions: i,ii,iv,v and part-a of question-iii only	➢ Solve those exercise questions related to the mentioned contents only. ➢ Discuss with students exercise questions ➢ Facilitate students in responding exercise questions
	Practical	• To separate the components of the given mixture of iron fillings and sand by Physical method"	➢ Demonstration ➢ Involve students in the performance of experiment
UNIT-2 STRUCTURE OF ATOM	Bohr's Atomic theory	• Postulates • Fundamental particles of an atom	➢ Discuss with students the postulates of Bohr's Atomic theory ➢ Use chart to explain the structure of atom ➢ Video lecture (if possible)
	Electronic Configuration	• Electronic configuration • Concepts of s and p sub shell • Electronic configuration of first 18 elements	➢ Discussion ➢ Chart presentation ➢ Video lecture (if possible) ➢ Give homework to students of electronic configuration of first 10 elements

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Chemistry Grade IX

Unit Name	Topic/Contents	Sub-Topics	Tips for Teachers
UNIT 1 Fundamental of Chemistry	Muslim Period (600-1600 AD)	• Jabber Ibne Haiyan (721-803A.D) • Muhammad ibn-e Zakariya Al-razi (864-930) • Al-beruni (973-1048 AD) • Ibn e sina (980-1037)	➢ Initiate discussion by writing the contribution of each Muslim Scientist ➢ Involve students in the discussion by asking questions ➢ Assign students "the contribution of Muslim Scientists in Chemistry" as Home work
	Branches of chemistry	• Chemistry • Branches of chemistry	➢ Initiate discussion by writing definition of Chemistry and branches of chemistry. ➢ Give at least five branches of chemistry as home work to students
	Basic Definitions	• Element • Compound • Mixture • Atomic number • Mass number • Relative Atomic mass • Atomic mass unit • Average Atomic mass	➢ Write the definition of the basic mentioned concepts on writing board for discussion with students ➢ Involve students in the discussion by asking questions to clarify the concepts ➢ Use chart showing the chemical formula of compounds from table 1.3 for starting the discussion. ➢ Give Activity 1.1 Symbols of Elements as home work. ➢ Use flash cards for teaching the basic definitions.
	Chemical formula	• Chemical formula • Types of chemical formula • Molecular mass • Formula mass	➢ Write key points of the sub topics on writing board for students responses ➢ Facilitate students and clarify their concepts.

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Chemistry

Table 3. Chapter wise assessment weightage in Physics Grade-IX Theory Paper

Unit No.	Unit	Assessment weightage	MCQs Section-A Marks: 12		Short Questions Section-B Option: 8 questions out of 11 Marks:32		Long Questions Section-C Option: 3 questions out of 4 Marks:21	
			Question	Marks	Questions	Marks	Questions	Marks
1	Physical Quantities and Measurement	12	1	1	1	4	1	4
2	Kinematics	12	1	1	1	4	1	4
3	Dynamics	14	1	1	2	8	1	3
4	Turning Effect of Forces	12	1	1	1	4	1	3
5	Gravitation	10	2	2	1	4	1	4
6	Work and Energy	10	2	2	1	4	1	4
7	Properties of Matter	10	1	1	1	4	1	3
8	Thermal Properties of Matter	12	1	1	2	8	1	3
9	Transfer of Heat	8	2	2	1	4	-	-
Total	-	100	12	12	11	44	8	28

Note: This Table of specification is a sample TOS for Physics Grade-IX paper.

Sample Base Assessment Weightage Of Physics Grade –IX According To (Curriculum, 2006)

SAMPLE: TOS (TABLE OF SPECIFICATION)

Table1. Cognitive abilities assessment weightage in physics Grade-IX Theory Paper

Questions	Knowledge (K)			Understanding (U)			Application (A)		
	Questions	Marks	%	Questions	Marks	%	Questions	Marks	%
MCQs	2	2	17	9	9	75	1	1	8
Short Questions	1	4	10	9	36	80	1	4	10
Long Questions	1	3	11	3+3	9+12	74	1	4	15

Table 2. Overall assessment Percentage of (Cognitive Levels)

Cognitive Level	Percentage
Knowledge(K)	20
Understanding(U)	45
Application(A)	35
Total	100

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	• Thermal Expansion • Explanation of linear thermal expansion of solid	• Apply the interactive techniques during teaching. • Explain by giving the daily life example and their application. • Apply inquiry approach
	• Anomalous behaviour of water • Explain anomalous behaviour of water	• Apply the interactive techniques during teaching. • Relate to daily examples
	• Heat capacity and specific heat capacity ○ Explain and differentiate between Heat capacity and specific heat capacity	• Apply Lecture cum demonstration and Inquiry method • Involve the students during use writing board
	• Latent heat and phase change ○ Introduction only	• Apply the inquiry approach • Explain by giving daily examples
	• Evaporation of liquids ○ Explanation of Evaporation of liquids	• Apply the inquiry approach • Explain by giving daily examples
	Exercise	Questions and problems in given exercise from above selected Topics should be answered and Solve by teacher or given as home assignments to students.
Practical	To draw a graph between temperature and time when ice is converted into water and then to steam by slow heating.	
IX. Transfer of Heat	• Conduction of heat ○ Explanation of conduction of heat	• Link with daily life observation related to conduction of heat. • Group discussion by inquiry approach
	• Convection of heat ○ Explanation of convection of heat	• Link with daily life observation related to convection of heat. • Group discussion by inquiry approach • Give the practical examples
	• Radiation of heat ○ Explanation of Radiation of heat ○ Good and bad emitters and absorbers	• Link with daily life observation related to radiation of heat. • Group discussion by inquiry approach • Give the practical examples

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VII. Properties of Matter	• Kinetic Molecular Model of Matter ○ Explanation of Kinetic Molecular Model of Matter	• By giving daily life examples clear the concept. • By using A-V aids.
	• Pressure ○ Explanation of Pressure ○ Atmospheric Pressure	• Apply inquiry and activity approach to explain the content. (i.e page 175) • Give the examples from daily life.
	• Pascal Principle • Statement /explanation of Pascal Principle	• Apply Lecture cum demonstration and Inquiry method • Link with daily life examples.
	• Archimedes' Principle • Statement /explanation Archimedes' Principle	• Apply Lecture cum demonstration and Inquiry method • Involve the students during use of writing board • Give the examples related Archimedes' Principle from daily life
	• Elasticity ○ Hook's law ○ Stress , strain and Young modulus	• Use of writing board and explain this topics with help of figure 7.9 and 7.10. • Apply the interactive techniques during teaching
	Exercise	Questions and problems in given exercise from above selected Topics should be answered and Solve by teacher or given as home assignments to students.
Practical	To find the density of a liquid using 5 ml syringe (instead of density bottle).	
VIII. Thermal Properties of matter	• Temperature and heat • Definitions and differences of temperature and heat	• Apply Lecture cum demonstration method to explain the topic • Link with daily life example
	• Temperature Scales relationship • Relationships between centigrade , Fahrenheit and kelvin	• Apply the interactive techniques during teaching • Give home assignments related problem of conversion of different scales

UNIT: 3 **BIODIVERSITY**	• Classification of Organisms, Basis of classification and Aims of classification.	• Write the key points of basis of classification and aims of classification on writing board and explain briefly.
	• Hierarchy of Taxonomy	• Explain hierarchy of taxonomy with the help of figure 3.1 • Explain table 3.2 with the help of chart.
	• Two kingdom system of classification and Five kingdom system of classification.	• Explain two and five kingdom system of classification and write key points of content on writing board. • Compare two kingdom system with five kingdom with the help of table 3.2 and ask students to make table this in their notebooks
	• Virus a unique particle and binomial nomenclature and importance of binomial nomenclature.	• Explain the concept of binomial nomenclature with the help of some examples. • Tell students biological names of some animals and biological names of some local plants with the help of table 3.3a and 3.3b.
	• Conservation of Biodiversity in Pakistan	• Home assignment: Ask students to write the step taken in Pakistan to conserve biodiversity in their notebook.
	• Exercise	• Only the questions given in exercise are related to these topics should be solved.
	• Practical	• Observation of the apparent distinguishing taxonomic characters from fresh/local and preserved specimens and recognition of plants and animals on the basis of their taxonomic characters

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	• Practical	• Study of different prepared slides and of Amoeba, Paramecium, Volvox • Study of external morphology of mustard plant and microscopic examination of root, stem, leaf, flower, fruit and seeds •
UNIT: 2 **SOLVING A BIOLOGICAL PROBLEM**	• Biological Method	• Explain each step of Biological method with the help of writing board. • Students open discussion: How observations are made with the help of five senses? • Conclude the discussion
	• Example of biological method (Biological Problem) 1. Biological Problem: What is the cause of Malaria? 2. Biological Problem: How is plasmodium transmitted to human being?	• Explain causes of plasmodium in biological method stepwise (observation, hypothesis and deductions, experiment and results). • Tell students about the importance of vaccination.
	• Exercise	• Only the questions given in exercise are related to these topics should be solved.
	• Biodiversity and importance of Biodiversity	• Mini lecture: Importance of biodiversity. • Questions and answers: To conclude the lesson.

BIOLOGY GRADE- IX

UNIT	TOPICS/CONTENTS	TIPS FOR TEACHERS
UNIT: 1 **INTRODUCTION TO BIOLOGY**	• Introduction to Biology and Branches of Biology.	• Explain the branches of Biology with the help of writing board.
	• Holy Quran and Biological Science	• Tell students; Allah is the ultimate creator of all living and non-living things. • Class activity: Ask students to work in pair and Identify given Quran verses related to creation of man, plants, animals, heaven etc. • Allow some pairs to present their work.
	• Muslim Scientists and their Contributions.	• Mini lecture on the contributions of Muslim Scientists.
	• Levels of Biological Organization.	• Explain level of biological organization with the help of figure 1.3
	• Exercise	• Only the questions given in exercise are related to these topics should be solved.

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Biology

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Overall assessment Percentage of (Cognitive Levels)

Cognitive Level	Percentage
Knowledge(K)	**10**
Understanding(U)	**78**
Application(A)	**12**
Total	**100**

Instructions for teachers/Paper setters:
Teachers are requested to follow the above sample of specification while designing the test/paper

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6	Solutions	7	14	2	2	2	8	1/1 part of long question	3.5
7	Electro chemistry	9	18	3	3	3	12	2/2 part of long question	7
8	Chemical Reactivity	4	08	1	1	1	4	------	------
	Total	48	96	12	12	12	48	08	28

Assessment weightage of Chemistry Grade –IX According to (Curriculum, 2006) only for Session(2020-2021)

TOS (TABLE OF SPECIFICATION)

Cognitive abilities assessment weightage in Chemistry Grade-IX Theory Paper for Session (2020-2021)

Questions	Knowledge (K)			Understanding (U)			Application (A)		
	Questions	Marks	%	Questions	Marks	%	Questions	Marks	%
MCQs	**2**	**2**	**17**	**9**	**9**	**75**	**1**	**1**	**8**
Short Questions	**1**	**4**	**10**	**9**	**36**	**80**	**1**	**4**	**10**
Long Questions	**1**	**3**	**11**	**3+3**	**9+12**	**74**	**1**	**4**	**15**

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Table of Specification for Chemistry Paper Grade-IX

S#	Unit name	Assessment weightage		MCQs (total-12)		Short questions (Section-B) (08/12 questions) Marks-32		Long Questions (Section-C) Questions 3/4 Marks-21	
		Curriculum-2006	Adjustment	Questions	marks	Questions	Marks	Questions	Marks
1	Fundamental of Chemistry	5	10	1	1	1	4	---	---
2	Structure of atoms	5	10	1	1	1	4	1/2 part of long question	3.5
3	Periodic table and Periodicity of Properties	5	10	1	1	1	4	1/2 part of long question	3.5
4	Structure of Molecules	8	16	2	2	2	8	2/2 part of long question	7
5	Physical States of Matter	5	10	1	1	1	4	1/2 part of Long question	3.5

	Practical	products of a decomposition reaction	➢ Involve students in the demonstration by asking question
		• To demonstrate that element and a compound can react to form a different element and a different compound	➢ Demonstration ➢ Involve students in practical demonstration

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	Exercise	• MCQs: i-x (All) • Short questions: I,ii,iii,vi,vii,ix,x • Long questions: ii,iii (only part(b) and (c)	➢ Involve students in the discussion by asking question
	Practical	• To demonstrate the conductivity of different given solutions.	➢ Demonstration ➢ Involve students in practical
		• To demonstrate a metal displacement reaction in aqueous solution.	➢ Demonstration ➢ Involve students in the Practical
UNIT 8 CHEMICAL REACTIVITY	Introduction Metals Characteristic of Metals	• Electropositive or metallic character of metals • Variation of metallic character across a period • Variation of metallic character across the group	➢ Initiate discussion by writing key points of the topic ➢ Charts presentation, video lecture (if possible)
	Non metals	• Characteristics of Non Metals • Comparison of Metals and Non Metals (Table 8.8) • Electronegative character • Halogens reactivity i) physical properties ii) chemical reactivity of Halogens	➢ Discussion with key points ➢ Give test yourself page no.245 of textbook as homework ➢ Charts presentation with key points of the comparison of Metals and Non Metals
	Exercise	• MCQs: i,ii,iii,v,vi,vii,ix • Short questions: i,viii,ix,x • Long questions: iv,v	➢ Discussing and involve students by asking questions ➢ Facilitate students in the question answer session.
		• To demonstrate that compound can be the	➢ Demonstration

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SOLUTIONS		• Saturated, unsaturated and super saturated solution	➢ Assign to students the homework of preparation of saturated, unsaturated and super saturated solution(Activity)
	Concentration of solution	• Percentage composition • Molarity • Problems involving molarity of solution	➢ Prepare in advance, charts showing percentage composition and molarity for starting the discussion ➢ Ask questions from students to involve them in demonstration
	Exercise	• MCQs: i,iv,v,vi,viii,ix,x • Numerical questions: i,ii,iii,iv,v,(all) • Short question: i,ii (only) • Long question: i,iii,v (only)	➢ Involve students in the discussion by asking Questions relevant to exercise ➢ Ask questions from the student to check their understanding
	Practical	• To prepare 100 cm^3 of 0.1M NaOH solution	➢ Demonstration ➢ Involve students in the performance of practical
		• To prepare 250 cm^3 of 0.1M oxalic acid solution	➢ Demonstration followed by students performance of practical
		• To prepare 100 cm^3 of 0.1M solution NaOH from the given 1M solution	➢ Demonstration by involving students
UNIT 7 ELECTRO CHEMISTRY	Introduction	• Oxidation /Reduction State and rules for assigning oxidation state	➢ Teacher should initiate discussion by writing key points of oxidation states and their rules on chart and involve students in the discussion process
	Oxidizing and reducing agents	• Oxidizing agent • Reducing agent	➢ Flash cards ➢ Discussion by asking questions in the middle from students
	Electro-chemical cell	• Concept of electrolyte • Electrolytic cells • Galvanic cell	➢ Involve students through question/answer ➢ Discuss key points ➢ Summarize the topics ➢ Give students the difference between electrolytic cell and galvanic cell as homework

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Table 3. Chapter wise assessment weightage in Biology Grade-IX Theory Paper

Unit No.	Unit	Assessment weightage is given in Curriculum 2006	MCQs Section-A Marks: 12		Short Questions Section-B Option: 8 questions out of 11 Marks:32		Long Questions Section-C Option: 3 questions out of 4 Marks:21	
			Question	Marks	Questions	Marks	Question	Marks
1	Introduction to Biology	6	1	1	1	4	-	-
2	Solving a Biological Problem	8	-	-	1	4	1	3
3	Biodiversity	4	1	1	-	-	1	3
4	Cells and Tissues	17	2	2	2	8	1	4
5	Cell Cycle	12	2	2	1	4	1	4
6	Enzymes	10	1	1	1	4	1	3
7	Bio-Energetics	17	2	2	2	8	1	4
8	Nutrition	9	1	1	1	4	1	3
9	Transport	17	2	2	2	8	1	4
Total	-	100	12	12	11	44	8	28

Note: The above Table of Specification is given only as sample TOS for the development of Biology-IX (Theory paper).

ASSESSMENT CRITERIA FOR FUTURE EAMINATION:

Assessment weightage of Biology Grade –IX According to (Curriculum, 2006)

SAMPLE: TOS (TABLE OF SPECIFICATION)

Table1. Cognitive abilities assessment weightage in Biology Grade-IX Theory Paper

Questions	Knowledge (K)			Understanding (U)			Application (A)		
	Questions	Marks	%	Questions	Marks	%	Questions	Marks	%
MCQs	2	2	17	9	9	75	1	1	8
Short Questions	1	4	10	9	36	80	1	4	10
Long Questions	1	3	11	3+3	9+12	74	1	4	15

Table 2. Overall assessment Percentage of (Cognitive Levels)

Cognitive Level	Percentage
Knowledge(K)	11
Understanding(U)	78
Application(A)	11
Total	100

	• Cardiovascular disorder • Myocardial infarction	• Explain key points of Myocardial infarction.
	• Exercise	• Only the questions given in exercise are related to these topics should be solved.
	• Practical	• Observation of root hairs on a growing root of onion, carrot etc • Investigation of the effect of physical activity on pulse rate

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Unit :9 **TRANSPORT**	• Transpiration • Stomatal control of transpiration - Factors affecting rate of transpiration - Significance of transpiration	• Explain transpiration with the help of writing board. • Explain concept of opening and closing of stomata with the help of Fig 9.3.
	• Transport in human beings - Blood (Plasma, Blood cells and cell like bodies, Red blood cells, White blood cells, Platelets) - Blood disorder leukaemia, thalassemia - Blood group system (ABO blood group system) - Blood transfusion in ABO system	• Explain the concept of blood group system to the students with the help of chart • Create open discussion among students on various blood groups. • Tell students: Causes, symptoms and treatment of leukaemia and thalassemia. • Explain Fig 9.1
	• Human heart - Structure of heart - Circulation of blood in heart chamber, cardiac cycle, pulse, blood vessels (Arteries, veins and capillaries)	• Explain the structure of human heart to the students with the help of chart • Use already prepared charts of Heart structure and functions in your school. • Home assignment – Ask students to draw structure of heart in their notebooks.

	- Vitamins (Vitamin A, C and D) - Minerals (role of calcium, iron, dietary fibers and water)	
	• Malnutrition A. Protein Energy malnutrition (PEM) i. Marasmus B. Mineral deficiency disease (MDD) i. Anemia ii. Goiter	• Explain the concept of malnutrition. • Discussion among students about various diseases in human being caused due to deficiency of minerals. • Allow students to share their ideas about various diseases in human being caused due to deficiency of minerals (if any).
	• Human digestion system (complete)	• Explain the process of human digestion system with the help of chart/writing board. • Home assignment: Ask students to write at least one function of each (Oral cavity, Oesophagus, Small intestine, Large intestine, Stomach, Pharynx) in their Notebooks.
	• Disorder of gut i. Ulcer	• Explain gastric ulcer with the help of fig 8.15.
	• Exercise	• Only the questions given in exercise are related to these topics should be solved.
	• Practical	• Microscopic examination of a transverse section of the small intestine to show the villi with prepared slides

	• Respiration and types of respiration • Aerobic respiration (Glycolysis, Krebs cycle and Electron Transport Chain)	• Explain the concept of Aerobic and anaerobic respiration with the help of figure 7.9 and 7.11
	• Comparison between Photosynthesis and Respiration	• Draw Table 7.2 on chart and tell the comparison between photosynthesis and respiration. • Home assignment: Ask the students to write at least four comparisons between photosynthesis and respiration in their notebooks.
	• Exercise	• Only the questions given in exercise are related to these topics should be solved.
	• Pratical	• Identification and labeling of the cellular and tissue structure in the CS of a leaf through observation under the microscope • Investigation of the release of carbon dioxide and heat during Aerobic Respiration in germinating seeds
Unit:8 **NUTRITION**	• Mineral nutrition in plants	• Explain the mineral nutrition in plants with the help of key points on writing board.
	• Components of Human food - Carbohydrates - Proteins - Fats	• Explain the components of human food in detail • Tell information related to common foods and their composition given in Table 8.2. • Home assignment: Ask student to draw table 8.2 in their notebooks.

Unit: 6 **ENZYMES**	• Metabolism and characteristics of Enzymes	• Explain Metabolism and characteristics of enzyme.
	• Mechanism of Enzyme action - Lock and key model - Induced fit model	• Explain lock and key model and induced fit model with the help of figure 6.4 and 6.5 by using different flash cards of their shapes. • Invite some students to arrange or complete lock and key model and induced fit model with the help of flash cards.
	• Exercise	• Only the questions given in exercise are related to these topics should be solved.
	• Practial	• Experiment to show working of enzyme in vitro e.g., pepsin working on meat in test tube.
UNIT: 7 **BIOENERGETICS**	• Bioenergetics	• Mini lectures: Bioenergetics • Write key points of Bioenergetics on writing board and explain.
	• ATP as the energy currency of cell	• Draw fig.7.3 of breakdown of ATPs to release energy on writing board and explain it.
	• Photosynthesis a life sustaining process • Mechanism of photosynthesis (Light reaction and Dark reaction)	• Explain the figure 7.6, 7.7 and 7.8 on writing board/chart • Class work: Teacher student open discussion on mechanism of photosynthesis (Light and Dark reaction).

	• Practical	• Examination under the microscope an animal cell (e.g. from frog's blood) and a plant cell (e.g. from onion epidermis), using an appropriate temporary staining technique, such as iodine or methylene blue. Or with prepared slides
UNIT: 5 **CELL CYCLE**	• Cell cycle • Interphase or resting stage	• Explain the position of a cell during interphase stage with the help of fig 5.1
	• Events of inter phase (G1-phase, S-phase, G2-phase)	• Draw figure 5.2 on writing board/chart and explain it.
	• Division phase • Mitosis and its stages and significance of mitosis	• Draw diagram of different stages of mitosis on writing board and briefly explain. • Home assignment: Ask students to draw diagrams of different stages of mitosis in their notebooks.
	• Meiosis (Meiosis 1 and Meiosis 2) • Significance of Meiosis	• Draw diagram of different stages of meiosis on writing board and briefly explain. • Class work: Ask students to draw diagrams of different stages of meiosis in their notebooks.
	• Exercise	• Only the questions given in exercise are related to these topics should be solved.
	• Practical	• Observation of various stages of mitosis and meiosis by slides, model and charts.

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UNIT: 4 **CELLS AND TISSUES**	• Light microscope and electron microscope.	• Compare light microscope and electron microscope with the help of table 4.1
	• Cellular structure and functions.	• Explain different parts of plant and animal cell with the help of writing board. • Home Assignment: Ask students to write at least one function of each Nucleus, Cytoplasm, Mitochondria, Cell wall, Golgi vesicles and Smooth Endoplasmic Reticulum in their notebooks.
	• Passage of Molecules into and out of cells (Active and Passive transport) - Diffusion - Facilitated diffusion - Osmosis (Turgor, Plasmolysis) - Active Transport - Endocytosis and Exocytosis	• Briefly explain each concept on writing board. • Class work: Ask students to write definition of diffusion, osmosis, turgor, plasmolysis, endocytosis and exocytosis in their notebooks.
	• Tissues - Plant tissues - Animal tissues	• Draw figure 4.25 on writing board and explain apical and lateral meristem. • Home assignment: Ask students to draw figure 4.28 in their notebooks.
	• Exercise	• Only the questions given in exercise are related to these topics should be solved.

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		5.4.5 Capital Value Tax 5.4.6 Income Tax 5.4.7 Calculating the amount of Sales Tax levied on Various Commodities 5.4.8 Calculating the excise duty levied on different items 5.4.9 Calculating the amount of the property tax imposed on property 5.4.10 Calculating the amount of Income Tax imposed on an individual with fixed income 5.4.11 Calculating the amount of Income Tax imposed on a salaried person (government employee)			incomes with daily life examples. Solve mentioned examples and a few questions of exercise and assign the remaining questions as a homework assignment.
		5.5 Utility Bills 5.5.1 Calculating the amount of bill for electricity 5.5.2 Gas bills 5.5.3 Telephone bills 5.5.4 Cellular phone charges	1 (P # 93) 2 (P # 95) 1 (P # 96) 1 (P # 99)	**5.2** Q. No.(4, 6, 7, 9)	
		5.6 Personal Income 5.6.1 Calculating Personal Income (weekly, monthly and annually) 5.6.2 Calculating Gross Income of a salaried person who is paid on the basis of	2, 3, 5 (P # 101, 102, 103)	**5.3** Q. No.(2, 4, 7) **5.4** MCQs: Q. No.(2)	

4.	Financial Mathematics	4.5 Commercial Banking			Develop curiosity among the students by giving examples of the currency of different countries also discuss the process and rate by which these currencies can be converted into Pakistani currency. Similarly discuss other examples from daily life. Discuss also the importance of insurance and its different terms and process for calculating bonus. Solve mentioned examples and a few questions of exercise and assign the remaining questions as a homework assignment.
		4.6 Exchange of Currencies	2 (P # 67, 68)		
		4.7 Profit / Markup 4.7.1 Calculation of Profit and Markup 4.7.2 Calculation of Principal Amount 4.7.3 Calculation of Profit/Markup rate	3, 4, 5, 6, 7, 8 (P # 68-72)	**4.1** Q. No.(1, 3, 5, 6(i,iii), 8(iv))	
		4.8 Insurance 4.8.1 Life Insurance 4.8.2 Vehicle Insurance 4.8.3 Purchasing of an Insurance Policy, its premiums and Bonus	1 (P # 74)	**4.2** Q. No.(1, 5)	
		4.9 Leasing/Financing 4.9.1 Leasing 4.9.2 Financing 4.9.3 Leasing/Financing of Motor Vehicle 4.9.4 Down Payment 4.9.5 Motor Vehicle Insurance 4.9.6 Processing Charges 4.9.7 Repayment in monthly instalments	1, 3 (P # 78, 79)	**4.3** Q. No.(1, 2) **4.4** MCQs: Q. No.(2)	
5.	Consumer Mathematics	5.4 Taxes 5.4.1 Direct and Indirect Taxes 5.4.2 Sales Tax 5.4.3 Excise Duty 5.4.4 Property Tax	1, 2 (P # 85) 3 (P # 88) 3 (P # 90)	**5.1** Q. No.(2, 5, 9)	Explain different terms of taxes, utility bills and calculations of general sale tax on utility bills, tax calculation on personal

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				1.9 MCQs: Q. No.(2)	
2.	Zakat, Ushr and Inheritance	2.7 Zakat	3, 4 (P # 32)	**2.1** Q. No.(1(iii), 4, 6, 8, 9)	Explain zakat, ushr and inheritance with the example from daily life and also discuss the formulas for the calculation of all these with students. Solve mentioned examples and a few questions of exercise and assign the remaining questions as a homework assignment.
		2.8 Ushr	2, 3 (P # 34,35)	**2.2** Q. No.(1, 2, 5)	
		2.9 Inheritance	1 (P # 36,37) 4 (P # 39)	**2.3** Q. No.(1, 4, 6) **2.4** MCQs: Q. No.(2)	
3.	Business Mathematics	3.6 Profit and Loss 3.6.1 Finding Profit or Loss in percent 3.6.2 Finding Profit or Loss when cost price and profit or loss percent are given 3.6.3 Finding the selling price when cost price and profit or loss percent are given 3.6.4 Finding cost price when selling price and profit or loss percent are given	2 (P # 46) 3,4 (P # 47) 5,6 (P # 48) 1,2 (P # 50) 3,4 (P # 51,52)	**3.1** Q. No.(1(ii), 2(i,ii), 3(i,iii), 4(ii,iii), 5(ii,iii), 6(i,iii), 8, 10) **3.2** Q. No.(1(i,iii), 2(i,iii), 3, 5, 9, 10, 12, 14)	Initiate these topics with the examples from daily life explain the method for calculating profit and loss, discount and also explain different terms used in banks. Solve mentioned examples and a few questions of exercise and assign the remaining questions as a homework assignment.
		3.7 Discount	2,4 (P # 55,56)	**3.3** Q. No.(1(i), 2(ii), 3(ii), 4(i), 5(ii), 7, 9, 11)	
		3.8 Business Partnership	3 (P # 59)	**3.4** Q. No.(2, 4, 6, 7) **3.5** MCQs: Q. No.(2)	

Unit No.	Unit	Topics/ Sub-Topics	Selected Course Contents		Teacher Guidelines
			Examples	Exercises	
1.	Percentage, Ratio and Proportion	1.7 Percentage 1.7.1 Concept of Percentage 1.7.2 Conversion of Percentage into Common Fraction 1.7.3 Conversion of Common Fraction into Percentage 1.7.4 Conversion of Percentage into a Decimal Fraction 1.7.5 Conversion of a Decimal Fraction into Percentage 1.7.6 Problems Involving Percentage	1, 2 (P # 3) 5, 6 (P # 4) 1(i), 2(ii), 3(i), 4(ii) (P # 5) 5(ii), 6(ii), 7(i) (P # 5, 6) 1, 3 (P # 7, 8)	**1.1** Q. No.(1, 5, 6, 9, 10, 12, 16, 18, 20, 22, 23) **1.2** Q. No.(2, 5, 6, 8, 9, 11, 12, 15, 16, 18, 20, 23, 25, 27, 29, 30) **1.3** Q. No.(1, 4, 5, 6, 9, 11, 12, 15, 16)	Explain the concept of percentage, ratios, proportion and compound proportion by righting different example on the board. Solve mentioned examples and a few questions of exercise and assign the remaining questions as a homework assignment.
		1.8 Ratio 1.8.1 Finding ratio when a number is increased or decrease to become a new number 1.8.2 Solving real life problems involving ratios	1(ii,iv) (P # 10) 2, 5 (P # 11, 12) 7 (P # 13)	**1.4** Q. No.(1, 2(i, iii, iv, v) 3, 6, 8)	
		1.9 Proportion 1.9.1 Kinds of Proportion 1.9.2 Direct Proportion 1.9.3 Inverse Proportion	1(ii,iv) (P # 15, 16) 2(ii,iv) (P # 16, 17) 1 (P # 19) 1 (P # 21)	**1.5** Q. No.(1(ii , iii, iv), 2(i, iv), 3(i, iv), 4(ii, iv), 5(I , iv), 6(ii, iv) **1.6** Q. No.(1, 3, 4, 8, 9) **1.7** Q. No.(1, 3, 7, 8)	
		1.10 Compound Proportion	1 (P # 24) 1 (P # 26)	**1.8** Q. No.(2, 4, 5, 7, 11, 12)	

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General Mathematics

Table 3. Chapter wise assessment weightage in Computer Science Grade – IX, theory paper for session (2020-2021)

Unit No.	Unit Name	Assessment weightage	MCQs Section A Marks (11)		Short Questions Section B Marks (36)		Long Questions Section C Marks (24)	
			Question	Marks	Question	Marks	Question	Marks
1	Fundamentals of Computer	15	02	02	02	08	--	--
2	Fundamentals of Operating System	15	02	02	01	04	01	08
3	Office Automation	25	03	03	02	08	--	--
4	Data Communication	20	02	02	02	08	01	08
5	Computer Networks	15	01	01	01	04	01	08
6	Computer Security & Ethics	10	01	01	01	04	--	--

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				– Explain common viruses and their antivirus with examples – Activity. Ask students to self-explore any four antiviruses as a home assignment.

GENERAL INSTRUCTIONS FOR EXERCISES:

- **Exclude all questions of those topics (sub topics) which are not included in the above content.**
- **Above is also considered for practical notebook.**

Assessment Weightage of Computer Science Grade – IX, According to (Curriculum, 2006) Only for Session (2020-2021)

TOS (Table of Specification)

Table 1. Cognitive abilities assessment weightage in Computer Science Grade-IX Theory paper for session 2020-2021.

Questions	Knowledge (K)			Understanding (U)			Application (A)		
	Questions	Marks	%	Questions	Marks	%	Questions	Marks	%
MCQs	02	02	18.18	07	07	63.63	02	02	18.18
Short Questions	02	08	22.22	05	20	55.55	02	08	22.22
Long Questions	01	08	33.33	02	16	66.66	---	---	---

Table 2. Overall assessment percentage of (Cognitive levels)

Cognitive Level	Percentage
Knowledge (K)	20
Understanding (U)	60
Application (A)	20
Total	100%

				– Explain different wireless communication medium by giving daily life examples. – Home assignment: Guided and un guided transmission mediums with examples.
		4.3 Communication Devices	4.3 Communication Devices	– Present and explain different communication devices and involve students to identify them. – Activity: Ask students to identify different communication devices.
5	COMPUTER NETWORK	**5.1 Computer Networks**	5.1.1 What is a Computer Network? 5.1.2 The uses of Network 5.1.3 Data Transmission Modes 5.1.4 Network Architecture 5.1.5 Types of Network Architecture	– Explain computer network and its uses with the help of block diagram and also give daily life examples. – Explain transmission modes with examples. e.g. mobile, walkie- talkie, T.V broadcasting etc. – Demonstrate the need of network Architecture. Why it is important. – Differentiate and Explain different types of network architecture with the help of example and block diagram and also give daily life example.
		5.2 Types of Networks	5.2.1 Types of Network on the basis of spatial distances	– Demonstrate LAN, MAN, WAN and their uses with the help of diagram. Also give daily life – Ask students to differentiate between LAN, MAN and WAN by giving examples from daily life.
6	COMPUTER SECURITY AND ETHICS	**6.1 Computer Security**	6.1.1 Importance of Computer Security 6.1.2 Computer Crime Terminologies 6.1.3 Attacks / threats to computer	– Briefly explain need and importance of computer security. – Explain cybercrime and also give daily life examples – Prerequisite grade VIII, basic knowledge of threats and virus attacks.
		6.2 Computer Viruses	6.2.1 How virus spread? 6.2.2 Symptoms of a virus Attack 6.2.3 Safeguard against viruses	– Demonstrate the detailed information about causes of virus spread with examples USB, websites, pirated software etc.

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		Operating System		– Activity: Ask students to create / open / save and manage files and folders practically.
3	OFFICE AUTOMATION	**3.1 Word Processing**	3.1.1 Word Processor 3.1.2 Manage a Word Document 3.1.3 Editing Text 3.1.5 Inserting Symbols in a Document 3.1.7 Format Text (Text, Paragraph, Page) 3.1.10 Insert and Position Pictures within a Document 3.1.11 Insert Word Art 3.1.13 Changing the Margins of Document	– Explain introduction and basic uses of word processing, So that student recognizes and define word processor. – Presenting the practical overview of interface and components of MS-Word. – Demonstrate on how to create / open / save / edit / insert and all basic formatting in computer lab. – Activity: Ask students to write simple paragraph and apply different formatting as discussed above.
		3.3 Urdu Editor	3.3.1 Using In-page Urdu Editor	– Lecture cum demonstration of In-page interface and practically involve students to interact with In-page software.
4	DATA COMMUNICATION	**4.1 Data Communication**	4.1.1 Data Communication Terminologies 4.1.2 Components of Communication System 4.1.3 Properties of Good Communication System 4.1.4 Modes of Data Communication	– Definition of the basic terms (data, data transmission, analog & digital signals, etc.) – Explain the basic components involved in a communication system i.e. (Sender, Receiver, Protocol, Message, Medium). – Describe different properties of a good communication system. – Explain synchronous and asynchronous transmission with block diagram.
		4.2 Transmission Medium	4.2.1 Guided Transmission Media 4.2.2 Unguided Media	– Explain and present different physical mediums and their uses. e.g. (coaxial, Twisted Pair, and fibre optic cables).

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Computer Science Grade-IX

Unit No.	Unit Name	Topic	Sub-topic / Content	Teacher Guide lines
1	FUNDAMENTALS OF COMPUTER	**1.1 Introduction to Computers**	1.1.3 Types of Computers 1.1.4 Classification of Digital computers	– Demonstrate on multimedia about types and classification of different computers.
		1.3 Computers Hardware	1.3.1 Input Devices 1.3.2 System Unit 1.3.3 Storage Devices 1.3.4 Output Devices 1.3.5 Memory	– Demonstrate all units of computer and it's all parts in the computer lab. – Activity: Ask students to draw diagrams of some input / output devices.
		1.4 How a Computer Works	1.4 How a Computer Works	– Demonstrate the basic working operations of computer with block diagram on board / chart.
		1.5 Computer Software	1.5.1 System Software 1.5.2 Application Software	– Explain what is system software and enlist its basic components. – Explain different types of application software with examples of common used software in daily life. – Activity: Ask students to identify all the components of computer hardware and ask questions.
2	FUNDAMENTALS OF OPERATING SYSTEM	**2.1 Introduction to Operating System**	2.1.1 Objectives of Operating System 2.1.2 Functions of Operating System 2.1.3 Common types of Operating System Interfaces	– Explain each objective of OS briefly by giving examples. – Demonstrate the overall functions of OS so student should be able to know get familiar of how users/ files/ resources get managed by OS. – Present different OS's interfaces and their difference / application in daily life.
		2.3 Getting started with GUI	2.3.1 Basic Icons of GUI Operating System. 2.3.2 Manage Data (files/folders).	– Familiarization of students with window 7 icons and desktop overview practically in computer lab.

GRADE 9 REVISED ACADEMIC CALENDAR FOR ACADEMIC YEAR 2020-21

UNIT	UNIT NAME	CONTENTS	TIPS FOR TEACHERS
01	History and Nature of Science	**Science and its Nature**	➢ Use a mini lecture on observation and experiment ➢ Use mind map activity by involving student to strengthen concept. **Homework:** Write a note on Science in your note book.
		Contributions of Muslim Scientists • Jaber Bin Hayan • Muhammad bin Zakriya Al-Razi • Ibn-ul-Haitham • Al-Bairuni • Bu-Ali-Sina	➢ Write main points on writing board and then use mini lecture ➢ Question answer session should be arranged **Homework:** Ask students to write a short note on "Muslim Scientist"
		Important contributions of peoples and cultures to scientific innovation • Greek period (300-600BC) • Muslim Period (700-1300AD) • European period(1700-1900AD) • Recent period **Some important Pakistani scientists**	➢ Arrange a quiz on " Muslim Period" then show the pictures of scientists ➢ Initiate discussion by coining the term " Muslim Scientists" **Homework:** Write ten contributions of Muslim to science in bullet form in your notebook.
		Islam and Science	➢ Initiate discussion on importance of science in Islam through question answer session **Homework:** Prepare a presentation on Islam & Science
		The Limitations of Science	➢ Explain the topic with the help of daily life examples ➢ Start with question answer session

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General Science

Table 3. Chapter wise assessment weightage in General Mathematics Grade-IX

Unit No	Unit	Assessment weightage	MCQs Section-A Marks: 20%			Short Questions Section-B Marks: 48%			Long Questions Section-C Marks: 32%		
			K	U	A	K	U	A	K	U	A
1	Percentage, Ratio and Proportion	15	2%				5.33%				
2	Zakat, Ushr and Inheritance	15	2%				5.33%				5.33%
3	Business Mathematics	8		2%				5.33%			
4	Financial Mathematics	7		2%				5.33%			
5	Consumer Mathematics	8		2%			5.33%				5.33%
6	Exponents and Logarithms	8	2%				5.33%				5.33%
7	Arithmetic and Geometric Sequences	9	2%				5.33%				5.33%
8	Sets and Functions	10	2%				5.33%				5.33%
9	Linear Graphs	10	2%								
10	Basic Statistics	10		2%				5.33%			5.33%
	Total	100	20%				48%		32%		

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Assessment Weightage of General Mathematics Grade –IX According To (Curriculum, 2007) for Future Use

TOS (TABLE OF SPECIFICATION)

Table1. Cognitive abilities assessment weightage in General Mathematics Grade-IX

Questions	Knowledge (K)			Understanding (U)			Application (A)		
	Questions	Marks	%	Questions	Marks	%	Questions	Marks	%
MCQs	10	10	13	5	5	7			
Short Questions				6	24	32	3	12	16
Long Questions							3	24	32

Table 2. Overall assessment Percentage of (Cognitive Levels)

Cognitive Level	Percentage
Knowledge(K)	13
Understanding(U)	39
Application(A)	48
Total	100

		10.1.2 Graphic Presentation	6 (P # 214) 7 (P # 216)		cumulative frequency, central tendency, median, mode quartiles and properties of arithmetic mean with daily life examples involving students. Solve mentioned examples and a few questions of exercise and assign the remaining questions as a homework assignment.
		10.2Cumulative Frequency 10.2.1 Cumulative Frequency Polygon	9 (P # 220)	**10.2** Q. No.(1(ii), 2, 3)	
		10.3Measure of Central Tendency or Average 10.3.1 Definition of Central Tendency 10.3.2 Estimation of Median, Mode and Quartiles graphically 10.3.3 Properties of Arithmetic Mean 10.3.4 Weighted Average	10 (P # 223) 11 (P # 225) 14 (P # 226) 15 (P # 227) 16 (P # 228) 17 (P # 229) 18 (P # 230) 19 (P # 231) 22 (P # 233) 23 (P # 234) 28 (P # 239) 30 (P # 242) 31 (P # 243) 32 (P # 244) 33 (P # 246)	**10.3** Q. No.(6, 8, 9)	
		10.4Measure of Dispersion	34 (P # 248) 37 (P # 250)	**10.4** Q. No.(2, 3) **10.5** MCQs: Q. No.(3)	

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		9.4.7 Construction of the table for pair of values satisfying a linear equation in two variables 9.4.8 Drawing the graph of a linear equation 9.4.9 Drawing the graph of the equation of the form y = c 9.4.10 Drawing the graph of the equation of the form x = a 9.4.11 Drawing the graph of the equation of the form y = mx 9.4.12 Drawing the graph of the equation of the form y = mx + c 9.4.13 Drawing a graph from a given table of (discrete) values			
		9.5 Conversion Graphs 9.5.1 Conversion of Hectares into Acres 9.5.2 Conversion graph of Degrees Celsius into Degrees Fahrenheit 9.5.3 Currency conversion graph		**9.3** Q. No.(4, 6) **9.4** MCQs: Q. No.(2)	
		9.6 Graphic Solution of Equation in Two Variable			
10.	Basic Statistics	10.1 Frequency Distribution 10.1.1 Formation of Frequency Distribution	1 (P # 210) 2 (P # 212) 4 (P # 213)	**10.1** Q. No.(1, 2, 5, 7)	Explain frequency distribution, formation of frequency distribution,

		8.4.6 Venn Diagrams of De-Morgan's Laws. 8.4.7 Verification of Commutative Laws of union and intersection and Associative Laws of Union and Intersection with the help of Venn diagram.			
		8.2 Binary Relation	1,3,4 (P # 177,178,179)	**8.4** Q. No.(2, 4)	
		8.3 Function 8.3.1 Kinds of Function	2, 4 (P # 182, 183)	**8.5** Q. No.(4) **8.6** MCQs: Q. No.(3)	
9.	Linear Graphs	9.4 Cartesian Plane and Linear Graphs 9.4.1 Identification of pair of real numbers 9.4.2 Cartesian Plane 9.4.3 Locating ordered pair as a Point in the Cartesian Plane. 9.4.4 Locating a Point in the Cartesian Plane (xy-Plane) 9.4.5 To Draw line segment, Triangle, Rectangle, Square and Parallelogram by joining the set of given points. 9.4.6 A Linear Equation in Two Variables		**9.1** Q. No.(2, 5, 6, 7, 8) **9.2** Q. No.(6, 9)	Discuss with students' graphs and types of graphs. Also discuss graph of a lines and points which satisfies the equations. Solve mentioned examples and a few questions of exercise and assign the remaining questions as a homework assignment.

		7.6 Arithmetic Mean between Two Numbers 7.6.1 Definition. 7.6.2 Arithmetic Means 7.6.3 Inserting n arithmetic means between two numbers	2 (P # 143)	**7.3** Q. No.(1, 4, 5, 9)	exercise and assign the remaining questions as a homework assignment.
		7.7 Geometric Sequence 7.7.1 Definition 7.7.2 General Term of a G.P	2, 3 (P # 148)	**7.4** Q. No.(3, 4, 5, 6, 9)	
		7.8 Geometric Mean Between Two Numbers 7.8.1 Definition 7.8.2 Geometric Means 7.8.3 Inserting n geometric means between two numbers	1 (P # 150) 1(P # 152)	**7.5** Q. No.(1(ii), 4, 5) **7.6** MCQs: Q. No.(3)	
8.	Sets and Functions	8.4 Concept of a Set 8.4.1 Operations on Sets 8.4.2 Properties of Union and Intersection 8.4.3 Venn Diagrams 8.4.4 Venn Diagrams of complement sets A^I, B^I, $(AUB)^I$, and $(AnB)^I$ When A and B are overlapping sets. 8.4.5 Venn diagrams of Union and Intersection of three sets.	1,3,4,6 (P # 158,159) 1,2,3,4 (P # 161,162)	**8.1** Q. No.(1(i,iv,v), 2(iii), 3(iv,vii), 4(ii,iv)) **8.2** Q. No.(5, 7) **8.3** Q. No.(4, 5)	Explain concept of set, binary operation on set and functions. Also explain Venn diagram with examples. Solve mentioned examples and a few questions of exercise and assign the remaining questions as a homework assignment.

		6.6 Scientific Notation 6.6.1 How to write a number x in Scientific Notation when x > 10	5, 6 (P # 120, 121)	**6.3** Q. No.(1, 3, 8, 9, 10, 11, 13, 14, 16)	
		6.7 Logarithm 6.7.1 Definition 6.7.2 Common Logarithm 6.7.3 Characteristic and Mantissa 6.7.4 Use of Lograrithmic Table	1, 2 (P # 122, 123) 1(i, iii, vi, viii) (P # 125) 2 (P # 126) Example(P # 126)	**6.4** Q. No.(1, 2, 3, 4, 7, 8, 9, 12, 13, 14, 16, 18, 20) **6.5(a)** Q. No.(1, 2, 3, 5, 7) **6.5(b)** Q. No.(1, 2, 5, 7, 8, 12)	
		6.8 Laws of Logarithm	1,2,4 (P # 129)	**6.6** Q. No.(1, 2, 5, 7, 9, 12)	
		Application of Logarithm	2(P # 130)	**6.7** Q. No.(1, 3, 5, 7, 9, 12) **6.8** MCQs: Q. No.(3)	
7.	Arithmetic and Geometric Sequences	7.2 Definition 7.2.1 How can a sequence be constructed from a formula or from general term?	2(i,iii)(P # 137)	**7.1** Q. No.(1, 3, 5, 6, 8, 10, 11, 12, 13, 14, 15)	Write examples of arithmetic and geometric sequence on the board and discuss the characteristics of these two. Explain different aspects of the sequences with examples. Also discuss other things with daily life examples. Solve mentioned examples and a few questions of
		7.5 Arithmetic Sequence 7.5.1 Definition 7.5.2 The General or nth term of Arithmetic Sequence 7.5.3 Regular pentagon, hexagon and octagon	1, 2, 3, 4 (P # 140,141,142)	**7.2** Q. No.(4, 6, 7, 8, 9, 11)	

		government pay scales or otherwise 5.6.3 Calculating of Net Income after deduction of Income Tax			
6.	Exponent and Logarithms	6.4 Radicals and Radicants 6.4.1 Concept of Radicals and Radicants 6.4.2 Qth Root or Radical 6.4.3 Difference between radical form and exponential form of an expression. 6.4.4 How to transform radical form to exponential form 6.4.5 How to transform exponential form of an expression to radical form of an expression.	2(ii) (P # 110)	**6.1** Q. No.(1(v,vi), 2(iv,vi), 3(v)	Explain radicant, radicals and exponents with examples also explain laws of exponents and their applications with examples. Solve mentioned examples and a few questions of exercise and assign the remaining questions as a homework assignment.
		6.5 Laws of Exponents/Indices 6.5.1 Base, Exponent and Value 6.5.2 Laws of Exponents/Indices 6.5.3 Application of the laws of exponents of real numbers when exponents are also real numbers.	1, 2 (P # 112) Examples (P # 113, 114, 115, 116)	**6.2** Q. No.(2, 6, 8, 13, 15)	

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		۲۔ سنت ۳۔ اجماع۔ اجماع کی تائید میں دلائل ۴۔ قیاس۔ (اصطلاحی تعریف، ارکان) ۵۔ فقہ کی تعریف۔ فقہ کی اہمیت۔ فقہ کی وسعت	
ہشتم	اسلام اور عصر حاضر	اسلام میں امت کا تصور۔ معنیٰ و مفہوم امت دعوت اور امت اجابت کا فرق قوم اور امت کا فرق امت مسلمہ کی امتیازی خصوصیات اسلام اور تصور قومیت قومیت کا تصور۔ قومیت کا اسلامی تصور۔ نسبی تقسیم کا تصور۔ اتحاد امت	معلم طلبہ کے مابین "امت مسلمہ ایک بہترین امت" کے موضوع پر ایک تقریری مقابلہ کروائے۔ معلم امت دعوت اور امت اجابت کا فرق مثالوں سے سمجھائے۔
نہم	عربی زبان	کلمہ، اقسام، اسم کی قسمیں اقسام المعرفہ اسمائے اشارہ۔ ضمائر۔ اسمائے ضمیر الفعل۔ فعل ماضی۔ فعل مضارع۔ فعل امر الحرف۔ حروف جارہ۔ حروف عطف۔ حروف نفی اور استفہام	معلم فعل ماضی۔ فعل مضارع اور فعل امر کی تعریف کروا کر مثالوں کے ذریعے سمجھائے۔ معلم حروف کی مذکورہ اقسام کی تعریفیں ذہن نشین کروائے۔

(الف)		سنت کا لغوی اور اصطلاحی مفہوم حدیث اور سنت میں فرق حدیث اور سنت کی عظمت و اہمیت واجب التقلید نمونہ۔ قانون ساز۔ منصف و قاضی حدیث اور سنت کی حجیت و شرعی حیثیت	معلم طلباء سے کسی کے گھر جانے اور اجازت طلب کرنے کی چند سنتوں کی فہرست بنوائے۔
(ب)	علوم حدیث کا تعارف	اصول حدیث، حدیث کے بنیادی اجزاء سند اور متن کے علوم سند کے علوم سند کے علوم سند کے علوم اخذ حدیث کے طریقے کتب حدیث کی اصناف و اقسام	معلم طلباء کے سامنے حدیث کی کوئی کتاب سامنے رکھ کر سند اور متن کی پہچان کرائے۔ معلم طلباء کو اخذ حدیث کے مختلف طریقے مثالوں سے سمجھائے۔ معلم طلباء کو لائبریری میں لے جا کر کتب حدیث کی مختلف اصناف و اقسام دکھائے۔
(ج)	منتخب احادیث	احادیث، ترجمہ و تشریح	معلم درست تلفظ کے ساتھ طلباء سے احادیث پڑھوائے اور چند احادیث مع ترجمہ زبانی یاد کرائے۔
ششم	اسلامی علوم اور مسلمانوں کی خدمات	علم اصول فقہ کی تعریف۔ اصول فقہ کی اہمیت و ضرورت اصول فقہ کا مختصر تعارف (تاریخی پس منظر) مصادر (قرآن، سنت، اجماع، قیاس، عقل) ا۔ قرآن	معلم طلبہ سے کہے کہ وہ گھر سے فقہ اسلامی کے مصادر کا چارٹ بنا کر لائیں۔ کسی ایک شرعی مسئلے کا حل مصادر شریعت کی روشنی میں کیسے تلاش کیا جائے گا؟ معلم طلبہ کو ایک مثال کے ذریعے سمجھائے۔

اسلامیات (اختیاری) جماعت نہم

باب	نام	عنوان	ہدایات برائے معلمین
اول	قرآن مجید	وحی کا لغوی معنٰی اور شرعی مفہوم۔ نبی کریم ﷺ پر نزول وحی کے طریقے۔ وحی متلو و غیر متلو الہامی کتب۔ تورات، زبور، انجیل اور قرآن مجید کا تعارف نزول قرآن مجید۔ مکی اور مدنی آیات۔ ترتیب نزول اور موجودہ ترتیب جمع و تدوین، حفاظت قرآن کتابت وحی جامعیت، کاملیت اور ابدیت	معلم طلباء کے سامنے وحی متلو و غیر متلو کی چند مثالیں پیش کریں۔ معلم الہامی کتب کی مشترکہ تعلیمات کا چارٹ طلباء سے بنوائے۔ معلم طلباء سے مکی اور مدنی سورتوں کی خصوصیات کا چارٹ گھر سے بنانے کے لئے کہے۔ معلم کلاس میں طلباء کے درمیان قرآن کی جامعیت اور ابدیت پر مباحثہ کرائے
دوم	عبادات	عبادت کا لغوی اور اصطلاحی مفہوم عبادت کا قرآنی تصور	قرآنی آیات کے حوالے سے معلم طلبہ پر واضح کرے کہ قرآن عبادت کا کیا تصور پیش کرتا ہے۔
سوم	سیرت رسول اکرم خاتم النبیین محمد رسول اللہ ﷺ	آفاقی رسالت، ضرورت، اہمیت تعظیم و تکریم اخلاق	معلم طلبہ پر واضح کرے کہ عقیدہ ختم نبوت ہمارے ایمان کی بنیادی جز ہے۔ معلم سورۃ اعراف کی آیت نمبر 157 کی روشنی میں طلباء کو آپ ﷺ کے حقوق ذہن نشین کرائے۔ معلم طلباء سے آپ ﷺ کے اخلاق حسنہ کی فہرست بنوائے۔
چہارم	قرآنی آیات	تمام قرآنی آیات کا ترجمہ اور تشریح	معلم درست تلفظ کے ساتھ بچوں کے سامنے قرات کرے پھر بچوں سے پڑھوائے۔
پنجم	حدیث اور سنت	حدیث کا لغوی اور اصطلاحی مفہوم	معلم بچوں کو حدیث قولی، فعلی اور تقریری کی ایک ایک مثال دے۔

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Assessment Weightage of General Science Grade –IX According To (Curriculum, 2006) Only for Session (2020-2021)

TOS (TABLE OF SPECIFICATION)

Overall assessment Percentage of (Cognitive Levels)

Cognitive Level	Percentage
Knowledge(K)	10
Understanding(U)	78
Application(A)	12
Total	100

Cognitive abilities assessment weightage in General Science Grade-IX for Session (2020-2021)

Questions	Knowledge (K)			Understanding (U)			Application (A)		
	Questions	Marks	%	Questions	Marks	%	Questions	Marks	%
MCQs	2	2	17	9	9	75	1	1	8
Short Questions	1	4	10	9	36	80	1	4	10
Long Questions	1	3	11	3+3	9+12	74	1	4	15

Instructions for teachers/Paper setters:

Teachers are requested to follow the above sample of specification while designing the test/paper

Table of Specification for General Science Paper Grade-IX

S#	Unit name	Assessment weightage		MCQs (total-15)		Short questions (Section-B) (09/12 questions) Marks-36		Long Questions (Section-C) Questions 3/4 Marks-24	
		Curriculum 2006	Adjust:	Question	marks	Question	Marks	Question	Marks
1	History And Nature Of Science	6	12	2	2	2	8	-	-
2	Chemistry And Life	12	24	3	3	3	12	1	8
3	Health, Disease And Prevention	12	24	4	4	3	12	1	8
4	Population And Environment	10	20	3	3	2	8	1	8
5	Energy Sources	10	20	3	3	2	8	1	8
6	Total	50	100		15	12	48	4	32

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			Write a detail note on overpopulation OR sustainable development
		Exercise	➢ Solve all questions in exercise related to the selected topics and sub-topics.
5	Energy Sources	**Energy Sources and their significance** • Fossil fuels • Coal • Petroleum • Natural gas	➢ Start Mind- mapping on the term " Energy" ➢ On fossils fuel deliver a mini lecture on Fossil fuels to make concept clear **Homework:** Write a detail note on " Resources of Energy"
		Renewable energy sources • Hydro electric energy • Solar energy • Wind energy	➢ Initiate Discussion on "Energy types & Resources of Energy" ➢ Present a diagram on the types of energy resources for better understanding **Homework:** Write a note on " Wise use of energy"
		Energy in development of a country	➢ Explain the topic key points on Writing board
		Energy consumption and conservation	➢ Show flash cards on Energy conservation to strengthen the concept **Homework:** Write a short note on " Energy Consumption and Conservation"
		Exercise	➢ Solve all questions of selected topics in the exercise

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		Viral disease • Polio • AIDS **Fungal Diseases** **Parasitic Diseases** • Malaria	➢ Initiate discussion on " Virus" and show Animation (if possible) ➢ Question Answer session should be encouraged for better understandin **Homework:** Prepare a presentation on Malaria
		First Aid and its Administration • Dog bite • Burn • Snake bite • Artificial Respiration	➢ Adopt Learning by doing for explaining topics. **Homework:** Present "first aid & administration" as role play OR Play out its clip
		Exercise	➢ Solve all questions related to these selected topics and sub-topics in exercise
04	Population and Environment	**Population Growth**	➢ Show Flash Cards and start Question Answer Session ➢ Show Animated modules (if possible) **Homework:** Write a short note on birth rate/ migration OR Write a short note on disadvantages of Over Population in your note book.
		Impacts of overpopulation on the environment • Agriculture effects • Urbanization • Over grazing • Deforestation	➢ Initiate discussion on population and give examples from daily life for better understanding ➢ Use a writing board to mark impacts **Homework:** ➢ Prepare a presentation on any one of the topic ➢ Deforestation OR Urbanization
		Overpopulation and sustainable development	➢ Ask students about sustainable development and if you find an answer then initiate discussion on Over population for better understating **Homework:**

03	Health Disease and Prevention	**Health and Food** • Process food • Natural and organic food diet • Fast/junk food	➢ Use hands on learning, visual clues and Mind-mapping, to make more clear the concept. ➢ Use Flash Cards. **Homework:** Ask students to Prepare a chart on types of food.
		Malnutrition, under nutrition, over-eating and obesity **Physical activity and health** **Rest and sleep**	➢ Initiate discussion on nutrition ➢ Show Video clips via mobile (if possible) **Homework:** Write a short note on the topic a) Malnutrition
		Abuse of drugs **Cleanliness and importance of health** **Blood and its composition**	➢ Use flash Cards and daily life examples to make understanding of the topic and for student motivation. ➢ Focus on Islamic point of view about drugs and cleanliness. **Homework:** Write ten points about bad behaviors of drug abusers Write 8 sentences about importance of cleanliness in your note book.
		Blood disease • Anemia • Disorder and disease • Bacterial diseases • TB (Tuberculosis)	➢ Use Mini lecture and show video clips via mobile (if possible) ➢ Initiate discussion on "disorder and disease" and ask questions from students to strengthen the concept. **Homework:** Write a short note on tetnus from your text book Write 5-names of blood diseases

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			Homework: Write 5 limitations of science in your notebook
		Exercise	➢ Solve all questions in exercise related to the selected topics and sub-topics
02	Chemistry and Life	**Introduction** **Common Elements and compounds and their physical and chemical properties** • Plastic • Sugar • Table salt	➢ Show the products made up of plastic in classroom ➢ Explain chemical and physical properties on writing board ➢ Show sugar and salt physically **Homework:** Make 10 MCQs of own choice on plastic ,sugar and table salt
		Physical and chemical properties of elements and compounds • Hydrogen • Copper • Water	➢ Show Models / Charts on " Physical & Chemical properties" **Homework:** Write Five names of Elements and five names of compounds in your Notebook.
		Recycling of materials • Recycling of copper • Recycling of plastic • Recycling of rubber	➢ Discuss and motivate students, to strengthen concept about recycling Show Animation (if possible) **Homework:** Write a note on "Recycling" in your note book
		Chemical change and its common example • Burning • Rusting • Fermentation	➢ Use mini-lecture to explain different chemical changes ➢ Give examples from daily life ➢ Show the rusted iron nails etc **Homework:** Write a short note on " Burning & Rusting" in your note book
		Exercise	➢ Solve all questions in exercise related to the selected topics and sub-topics

	Pakistan Movement		2. Short Questions Activity "A" given at page 78-79. 3. MCQs Activity "B" given at page 79-80.	• Ask comprehension questions and help students to write the answers in their notebooks. • MCQs can be assigned for Homework.	
		Vocabulary	1. Root words. Activity at page # 80	• Help students to understand the concept of root words with the help of given examples.	
		Writing	1. Pattern of organizing paragraphs. Activity is at page # 80-81	• Explain how to organize paragraphs while writing an Essay. Help students critically examine the order of arrangement of paragraphs in carrying out the relevant activity.	
10	Water Scarcity in Pakistan	Comprehension	1. Reading of the Unit Text. 2. Short Questions Activity " A" given at page 97 3. MCQs Activity " B" given at page# 97-98	• After carrying out various pre-reading strategies, teacher will read the given text loud. • Ask comprehension questions (post reading) and help students write the answers in their notebooks. • MCQs can be assigned for Home work.	
		Vocabulary	1. Word Class and Meaning. Activity "A" given at page# 98	• Explain 'world class' and help the students to identify the word Class and meaning of given words.	

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			2. Short Questions Activity "A" given at page 68. 3. MCQs Activity "B" given at page 68-69.	• Ask comprehension questions and help students to write the answers in their notebooks. • MCQs can be assigned for Homework.	
		Vocabulary	Glossary, page 66-68	• Explain the meanings of the given words.	
		Writing	1. Paragraph on respect of elders page# 70 2. English to Urdu Translation given at page # 69	• Revise with students writing the topic sentence, supporting details and conclusion. • Ask the students to write a paragraph on 'Respect of Elders' as Homework. • Revise Tenses learnt earlier and help students in translating the given paragraph.	Activity "A" is indirectly addressed in comprehension. Activity "B" is also discussed by the teacher while reading.
		Grammar	1. Modal verbs, Regular and Irregular verbs, page# 70-73	• Explain the use of given Modal verbs for different purposes and help students in doing the relevant activities. • Assign 'The use of Regular and Irregular verb' activity as a Homework.	
08	Women's Role in the	Comprehension	1. Reading of the Unit Text.	• After carrying out various pre-reading strategies, teacher will read the given text aloud.	

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06	In spite of War (Poem)	Comprehension	1. Recitation of the Poem. 2. Short Questions Activity "A" given at page 58. 3. MCQs Activity "B" given at page 58-59.	• Recite the poem aloud paying attention to rhyme and rhythm. • Ask comprehension questions and help students to write the answers in their notebooks. • MCQs can be assigned for Homework.	
		Vocabulary	Glossary Page 57	• Help students in understanding meanings of difficult words.	Activity at page 59 is indirectly addressed in the summary writing of the poem.
		Writing	1. Summary writing Activity A at page# 59 2. Paraphrase writing Activity B page# 59	• Teacher must explain the concept of paraphrase. • Teacher must explain the concept of summary skills in the class.	
		Grammar	1. Adjective phrase Activity 'A' and 'B' page #62 2. Adjective clauses Activity "C"& "D"page#62	• Explain Adjective phrase and Adjective clause concepts in the class at page # 59,60,61 and help students in doing the relevant activity.	
07	The aged Mother	Comprehension	1. Reading of the Unit Text.	• After carrying out various pre-reading strategies, teacher will read the given text aloud.	

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			3. Types of clauses, Activity given at 28-30.		
05	The Great Masjid of Cordoba and Iqbal	Comprehension	1. Reading of the Unit Text. 2. Short Questions Activity "A" given at page 46-47. 3. MCQs Activity "B" given at page 47.	• After carrying out various pre reading strategies, teacher will read text aloud. • Ask comprehension questions and help students to write the answers in their notebooks. • MCQs can be assigned for Homework.	
		Vocabulary	1. Use of thesaurus to locate synonyms, activity A given at Page # 48	• Help students to locate synonyms of given words and also make sentences.	
		Writing	1. Expository essay writing Activity B at page# 48.	• Explain students the features of an expository essay and help them in writing both essays on given topics. • Assign activity-A as Homework.	
		Grammar	Activities Activity A, B, C,& D Pages# 48-50	• Revise types of adjectives in the class and explain order of adjectives to help the students in doing relevant activities. • Also give activity A, C & D as Home Work	

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03	Dreams (Poem)	Comprehension	1. Recitation of the poem. 2. Short Questions Activity "A" given at page 24. 3. MCQs Activity "B" given at page 24-25.	• Recite the poem aloud paying attention to the rise and fall. • Ask comprehension questions and help students to write the answers in their notebooks. • MCQs can be assigned as Homework.	
		Vocabulary	1. Glossary given at Page 24.	• Help students understand the contextual meaning the words in the given poem.	Exclude activity of vocabulary building Table at page 25 as no SLO is mentioned for it.
		Writing	1. Persuasive Essay given at page #25 2. Activity "A" given at page # 26 3. Essay on famous personality, Activity "B" given at page# 26.	• Brainstorm and help the student in writing both essays mentioned in activity "A" and "B"	
		Grammar	1. Transitive and intransitive verbs, activity A at Page # 26. 2. Present participle or past participle, Activity A & B given at 27.	• Explain transitive and intransitive verbs and assign Activity "A" at page 27 as Homework. • Explain given types of clauses and help students in identifying different types in the relevant activity.	

Unit No.	Topic	Language Skill	Selected Content/Exercise Questions	Teacher's Guidelines	Rationale For excluded Exercise(s)Questions
01	Simplicity and Humility of Hazrat Muhammad (رسول اکرم خاتم النبیین محمد رسول اللہ ﷺ)	Comprehension	4. Reading of the Unit Text. 5. Short Questions Activity "A" given at page 6. 6. MCQs Activity "B" given at page 6-7.	• After carrying out various pre-reading strategies, teacher will read the given text aloud. • Ask comprehension questions and help students to write the answers in their notebooks. • MCQs can be assigned for Homework.	
		Vocabulary	1. Use of Dictionary Words given at page # 07	• Revise with students the use of dictionary and assign the relevant activity for Homework	
		Writing	1. Unified paragraph Activity "A" given at page # 07. 2. Summary writing activity "B" given at page # 07	• Help students to write a unified paragraph on given topic and assign students as Homework. • Help students to write the summary of this Lesson.	
		Grammar	Activities A,B,C,D and E are given at page # 08-09	• Explain all these activities and assign these activities as Homework.	

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English

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GRADE-X

GRADE-IX TABLE OF SPECIFICATION ISLAMIC STUDIES

Unit No	Name of Unit	MCQs		CRQs		ERQs	
		No of Question	Marks	No of Question	Marks	No of Questions	Marks
1	قرآن مجید	03	03	02	08	01	08
2	عبادات	01	01	01	04	1/2	04
3	سیرت رسول اکرم خاتم النبیین محمد رسول اللہ صلی اللہ علیہ وسلم	02	02	01	04	1/2	04
4	قرآنی آیات	02	02	02	08	1/2	04
5	حدیث اور سنت	02	02	02	08	1/2	04
6	اسلامی علوم اور مسلمانوں کی خدمات	02	02	01	04	1/2	04
8	اسلام اور عصر حاضر	02	02	02	08		
9	عربی زبان	01	01	01	04	1/2	04
Total		**15**	**15**	**12**	**48**		**32**

COGNILIVE LEVEL	PERCENTAGE (%)
Knowledge (K)	50%
Understanding (U)	40%
Application (A)	10%
TOTAL	**100%**

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نوٹ :

۱۔ اس درسی کتاب میں جہاں بھی حضور پاک ﷺ کا نام مبارک آجائے تو اس کو رسول اکرم خاتم النبیین محمد رسول اللہ ﷺ لکھا اور پڑھا جائے۔

۲۔ یہ سیلبس صرف تعلیمی سال 2020-21 کیلئے ہے۔

۳۔ جن ابواب اور عنوانات کی نشاندہی کی گئی ہے۔ معلم انہی کی تدریس کرے۔

۴۔ ٹسٹ لیتے یا پرچہ بناتے وقت مذکورہ ابواب اور عنوانات کو مد نظر رکھے۔

۵۔ انہی ابواب اور عنوانات سے متعلق مشقوں میں دیئے گئے سوالات حل کروائے۔

۶۔ معلم تمام قرآنی آیات اور احادیث کو درست تلفظ کے ساتھ پڑھے۔ اور بچوں سے مشق کروائے۔

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اُردُو جماعت دہم

سبق نمبر	عنوان	لسانی مہارت	منتخب مشقی سوالات / سرگرمیاں	معاون ہدایات برائے اساتذہ	استدلال
۱	مولوی عبدالحق	تفہیم	عبارت خوانی	طلبہ سے عبارت خوانی کروائیں، تلفظ پر خصوصی توجہ دیں اور خاص الفاظ کی تفہیم کروائیں۔	
			تفہیمی سوالات	سوال نمبر ۲ تا ۴ کے جوابات طلبہ سے لکھوائیں۔	
			جملے مکمل کرنا	گھر کے کام کے طور پر تفویض کریں۔	طلبہ متن پڑھ چکے ہیں۔
			سیاق وسباق کے حوالے سے عبارت کی وضاحت کرنا	طلبہ سے مشق میں دی گئی عبارت کی سیاق وسباق کے حوالے سے وضاحت کروائیں۔	
		قواعد / گرامر	محاورات کا جملوں میں استعمال	طلبہ سے محاورات جملوں میں استعمال کروا کر کاپیوں میں لکھوائیں۔	
			جملوں کی تقطیع کرنا	طلبہ کو جملوں کی تقطیع کرنے کا طریقہ سکھائیں اور تصور کی پختگی کے لیے مشق کے طور پر اُن سے مختلف جملوں کی تقطیع کروائیں۔	
		نوٹ: درسی کتاب، صفحہ ۸ پر دی گئی سرگرمی نمبر ا طلبہ سے کروائیں۔			
		تفہیم	عبارت خوانی	طلبہ سے عبارت خوانی کروائیں، تلفظ پر خصوصی توجہ دیں اور خاص الفاظ کی تفہیم کروائیں۔	

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Urdu

Section-C **CRQs/ERQs**	**Total Allocated Marks = 24**			
Composition focusing on development of creative writing skills				
Language Skill	**Qs**	**Marks**	**Cognitive level**	
Write and revise formal letters to people in extended social and academic environment for various purposes.	01	08	A	25%
Write and revise applications to people in extended environment using correct format, layout and tone.	01	08	A	25%
Write a unified paragraph on a given topic to show: • Clear topic sentence using specific words, vivid verbs, modifiers, etc. • Adequate supporting detail • Appropriate pronoun-antecedent relationship and transitional devices within a paragraph.	01	08	A	25%
Interpret the visual organizer/situation in a/an: • visual cue • mind map • Outlines etc.		09	A	25%

- **Note:** Include essay/dialogue writing in Section 'C' for Grade-X classroom test replacing letter/application and story writing given for Grade-IX.

(IV) Stanza based Comprehension Question requiring following responses:				
a) Inferential	01	02	U	25%
b) identification of figures of speech	01	02	A	25%
c) personal response	01	02	A	25%
d) vocabulary	01	02	U	25%
(V) Apply critical thinking to interact with text to:				
a) make simple inferences using context	01	01	U	20%
b) extract main idea and supporting detail	01	02	A	40%
c) comprehend/interpret text	01	01	U	20%
d) distinguish between what is clearly stated and what is implied	01	01	U	20%

- **Note:** Assign equal weightage to all the selected units/lessons.

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Proposed Table of Specification for Annual Assessment of Grades IX-X Students in the Subject of ENGLISH				
Section –A **MCQs**	**Total Allocated Marks =15**			
Multiple Choice Questions				
Language Skill	**Questions**	**Marks**	**Cognitive level**	
Content/Text Comprehension	05	05	U	33.33%
Vocabulary	05	05	U	33.33%
Grammar	05	05	A	33.33%
Total	15	15		100

Section –B **RRQs**	**Total Allocated Marks =36**			
(II) Text based Comprehension Question requiring following responses:				
Language Skill	**Qs**	**Marks**	**Cognitive level**	
a) Literal/factual information	02	06	K	25%
b) Interpretive	02	06	U	25%
c) Inferential	02	06	U	25%
d) Open ended	01	03	A	12.5%
e) Evaluative	01	03	A	12.5%
(III) Writing Paraphrase of the given stanza to restate the message in simple prose	01	05	A	100%

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S#	Verb Phrases	Examples
1	Act	Act on, act upon, act as etc
2	Break	Break out, break into, break in, break through, break down, break up
3	Call	Call on, call out, call for, call in, call upon etc
4	Carry	Carry on, carry out, carry over, carry off etc
5	Look	Look into, look after, look up, look for, look out , look forward to etc
6	Put	Put out, put up with, put down, put off, put on etc
7	set	Set up, set out, set off, set in, set aside etc

Recommended list Pair of words:

1. Affect-effect	2. Advise-advice	3. Alter-altar
4. Angle-angel	5. Break-brake	6. Cell-sell
7. Course-coarse	8. Dairy-diary	9. Elder-older
10. Eligible-illegible	11. Except-accept	12. Flour-floor
13. Fair-fare	14. Heel-heal	15. Lose-loose
16. Idol-idle	17. Lessen-lesson	18. Lawyer-liar
19. Meet-meat	20. Marry-merry	21. Minor-miner
22. Principal-principle	23. Quite-quiet	24. Stationary-stationery

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		Grammar	1. Punctuations marks, activities A, B & C are given at page 153. 2. Direct and Indirect Speech, activities A, B, C and D are at page 146-147.	• Revise punctuation rules and explain given punctuation marks and assign the given activity as homework. • Revise and explain Direct Narrations and help students in completion of given activities.	

Composition	Selected Essays / Dialogues	**Teacher's Guidelines**
Essays	Essays: 7. How Do You Spend Leisure Time 8. My Favourite Writer/Personality 9. Importance of Technical Education 10. How to Discourage Unfair Means in Exams 11. A Visit to an Historical Place 12. Why I Love Pakistan/Father/Mother 13. Advantages and Disadvantages of Cell Phones 14. Choice of Career 15. Evening Walk 16. An Interesting Match	• Explain how to write a unified paragraphs to write essays. • Explain the different types of essays in the class to help the students. • Help the students to use transitional devices in writing effective paragraphs.
Dialogue	Dialogues: 1. A teacher & a student about career counseling 2. A father & his son about exam preparation 3. A mother and her daughter about her studies 4. A doctor and patient about COVID-19 5. A shopkeeper and the customer about high prices of goods	• Assign any five selected Dialogues on suggested

Recommended list of Verb Phrases:

		Writing	1. Translation Activity "C" given at Page# 134 2. Persuasive Essay writing Activity "B" given at Page#134	• Explain the difficult words and assign Urdu translation activity for Homework. • Help the students to write Essay on the Topic given at page 134, activity B	Activity "A" Summary writing is indirectly addressed in short questions, hence, exclude it.
15	Opportunity Poem (Poem)	Comprehension	1. Recitation of the poem. 2. Short Questions Activity "A" given at page# 150-151 3. MCQs Activity "B" given at page 151	• Recite the poem aloud paying attention to rhyme and rhythm. • Ask comprehension questions and help students to write the answers in their notebooks. • MCQs can be assigned for Homework.	
		Vocabulary	1. Connotation and Denotation, Activity 'A' given at page 151.		Activity 'B' at page 152 is skipped as it is addressed in the paraphrase of the poem.
		Writing	1. Paraphrase Activity B, Page 152	• Help students to write paraphrase of all stanzas and assign paraphrasing the last stanza as Home work. • Help student in developing a mind map on the given topic for writing the essay.	Exclude writing expository paragraph activity, as sufficient practice has been done for it.

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		Writing	1. Paraphrase, Activity "A" given at page# 125 2. Expository Essay, Activity C given at page# 125.	• Help students to write paraphrase and assign paraphrasing the first stanza as Home work. • Help student in developing a mind map on the given topic for writing the essay.	Exclude Summary writing as sufficient practice has been done
		Grammar	1. First conditional sentences given at page# 125 2. Second conditional sentences given 125-126.	• Revise clauses/Tenses and explain conditional sentences. • Help the students to complete Activity A, B & C given at page 126.	
13	Hazrat Umar (رضی اللہ عنہ)	Comprehension	1. Reading of the Unit Text. 2. Short question Activity "A" given at page# 131. 3. MCQs Activity "B" given at page# 131,132.	• After carrying out various pre- reading strategies, teacher will read the given text loud. • Ask the Comprehension questions (post reading) and help students write the answer in their notebooks. • MCQs can be assigned for Homework.	
		Vocabulary	1. Formation of Verbs Activity "B", page# 133	• Discuss common rules for formation of verbs and assign the relevant activity as Homework. • Explain the given table at page # 132 and help students to complete the activity in the class.	Exclude Correct spelling & pronunciation activity

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			2. Change Words into adverbs. Activity "B" given at page# 98	• Discuss some rules for changing words into adverbs and ask students to change words into adverbs as Homework.	
		Writing	1. Summary with the help of mind map. Activity A given at page# 99. 2. Unified paragraph. Activity B given at page 99.	• Help students to develop a mind map and assign them to write summary of the unit as Home work. • Revise features of a unified paragraph and help students to write a unified paragraph on given topic.	
		Grammar			Infinitive and Infinitive phrase at page 100 and Gerund Phrase at page# 101 may be skipped due to sufficient practice.
12	They Have Cut Down the Pines (Poem)	Comprehension	1. Recitation of the poem. 2. Short Questions Activity "A" given at page# 123 3. MCQs Activity "B" given page 124	• Recite poem paying attention to rhyme & rhythm. • Ask comprehension Questions and help students write the answers in their notebooks. • MCQs can be assigned for Homework.	
		Vocabulary	1. Analysis of given Words and Phrases, given at page# 124.	• Explain given Words and phrases and help them to know the tone of poem.	

۱۶	غزل(۲) ادا جعفری	ذخیرہ الفاظ	الفاظ و مرکبات کا جملوں میں استعمال	مشق میں دیے گئے الفاظ و مرکبات کو طلبہ سے جملوں میں اس طرح استعمال کروائیں کہ ان کے مطلب واضح ہو جائے۔	
		قواعد / گرامر	الفاظ، متضاد	گھر کے کام کے طور پر تفویض کریں۔	طلبہ یہ تصورات پچھلی جماعتوں میں سیکھ چکے ہیں۔
			الفاظ، مترادف		
		نوٹ: طلبہ کو ہر سبق کے آغاز میں دی گئی مصنفین / شعراء کے حوالے سے معلومات (مختصر حالاتِ زندگی، اسلوب اور تصانیف) فراہم کریں۔			
		نوٹ: درج ذیل مضامین امتحانی پرچے میں شامل کریں۔			
		۱۔ عالمی وبا" کورونا" کے روزمرہ زندگی پر اثرات ۲۔ پسندیدہ شخصیت ۳۔ سرسبز و شاداب پاکستان ۴۔ سماجی اور معاشی ترقی میں تعلیم کا کردار ۵۔ موبائل فون کا مثبت استعمال کیسے کیا جائے؟			

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۱۴	مکاتیبِ غالب مرزا اسد اللہ خان غالبؔ	تفہیم	تفہیمی سوالات	سوال نمبر ۲ تا ۶ کے جوابات طلبہ سے لکھوائیں۔	
		قواعد / گرامر	الفاظ، مترادف	طلبہ سے مشق میں دیے گئے الفاظ کے مترادف بنوا کر لکھوائیں۔	
		اصنافِ سخن	مکتوب / خط کی اقسام	طلبہ کو خطوط کی اقسام سکھائیں اور مشق کے طور پر خط کے لازمی اجزا کا لحاظ رکھتے ہوئے دوست کو چھٹیوں کی مصروفیات کے بارے میں خط لکھوائیں۔	
۱۵	مسلمانانِ الجزائر (نظم)	تفہیم	بلند خوانی	طلبہ سے نظم کی بلند خوانی کروائیں۔	
			اشعار کی تشریح	خاص الفاظ کی وضاحت کرتے ہوئے شاعر اور نظم کا حوالہ دے کر طلبہ سے اشعار کی تشریح کروائیں۔	
			کثیر الانتخابی سوالات	گھر کے کام کے طور پر تفویض کریں۔	طلبہ نظم پڑھ چکے ہیں۔
		نوٹ: درسی کتاب، صفحہ ۱۳۳ پر دی گئی سرگرمی طلبہ سے مکمل کروائیں۔			
		تفہیم	بلند خوانی	طلبہ سے غزل کی بلند خوانی اس انداز میں کروائیں کہ نثر اور نظم کا فرق واضح ہو۔	
			تشریح / وضاحت	خاص الفاظ کی وضاحت کرتے ہوئے شاعر کا حوالہ دے اور طلبہ سے اشعار کی تشریح کروائیں۔	

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		ذخیرہ الفاظ	الفاظ وتراکیب کا جملوں میں استعمال	مشق میں دیے گئے الفاظ وتراکیب کو طلبہ سے جملوں میں استعمال کروائیں اور کاپیوں میں لکھوائیں۔	
۱۳	سرابِ منزل	تفہیم	عبارت خوانی	طلبہ سے عبارت خوانی کروائیں، تلفظ پر خصوصی توجہ دیں اور خاص الفاظ کی تفہیم کروائیں۔	
			تفہیمی سوالات	سوال نمبر ۲، ۳ کے جوابات طلبہ سے لکھوائیں۔	
			کثیر الانتخابی سوالات	گھر کے کام کے طور پر تفویض کریں۔	طلبہ متن پڑھ چکے ہیں۔
		ذخیرہ الفاظ	الفاظ وتراکیب کو جملوں میں استعمال کرنا	طلبہ سے مشق میں دیے گئے الفاظ وتراکیب کو جملوں میں استعمال کروائیں اور کاپیوں میں لکھوائیں۔	
		قواعد / گرامر	جملہ معترضہ کے حوالے سے جملوں کو درست کرنا	مشق میں دیے گئے جملوں کی جملہ معترضہ کے حوالے سے طلبہ سے درستی کروائیں۔	طلبہ یہ تصور' نام دیومالی صفحہ ۶۸' میں سیکھ چکے ہیں۔
		اصنافِ سخن	سفر نامہ	سفر نامے کی تعریف کریں اور طلبہ کو سفر نامہ لکھنے کا طریقہ سکھائیں۔ مشق کے طور پر طلبہ سے کسی سیاحتی مقام کی روداد لکھوائیں۔	
			عبارت خوانی	طلبہ سے عبارت خوانی کروائیں، تلفظ پر خصوصی توجہ دیں اور خاص الفاظ کی تفہیم کروائیں۔	

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		اصنافِ سخن	خاکہ	خاکے کی تعریف مثالوں اور چند مشہور خاکہ نگاروں کے تناظر میں واضح کریں۔	
۱۱	اے دیس کی ہواؤ	تفہیم	بلند خوانی	طلبہ سے ملی نغمے 'اے دیس کی ہواؤ' کی بلند خوانی کروائیں۔	
			اشعار کی تشریح	خاص الفاظ کی وضاحت کرتے ہوئے شاعر اور نظم کا حوالہ دے کر طلبہ سے اشعار کی تشریح کروائیں۔	
			تلخیص کرنا / خلاصہ لکھنا	طلبہ کو نظم کا خلاصہ لکھنا سکھائیں اور تصوّر کی پختگی کے لیے اُن سے اس نظم کی تلخیص کروائیں۔	
		اصنافِ سخن	گیت / ملی نغمہ	گیت اور ملی نغمے کی تعریف کریں اور مثالوں سے وضاحت کریں۔	
۱۲	غزل(۲) فراق گورکھپوری	تفہیم	بلند خوانی	طلبہ سے غزل کی بلند خوانی اس انداز میں کروائیں کہ نثر اور نظم کا فرق واضح ہو۔	
			تشریح / وضاحت	خاص الفاظ کی وضاحت کرتے ہوئے شاعر کا حوالہ دے کر طلبہ سے اشعار کی تشریح کروائیں۔	
		اصنافِ شاعری	تلمیح	صنعتِ تلمیح کی تعریف کریں اور مثالوں سے وضاحت کریں۔ تصوّر کی پختگی کے لیے اشعار میں طلبہ سے تلمیح کی پہچان کروائیں۔	

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		اصنافِ شاعری	مجازِ مرسل	مجازِ مرسل کی تعریف کریں اور مثالوں سے وضاحت کریں۔ مشق کے طور پر اشعار میں طلبہ سے مجازِ مرسل کی پہچان کروائیں۔	
		اصنافِ سخن	لوک کہانی	لوک کہانی کی تعریف کریں اور مثالوں سے وضاحت کریں۔	
۱۰	نام دیومالی	تفہیم	عبارت خوانی	طلبہ سے عبارت خوانی کروائیں، تلفظ پر خصوصی توجہ دیں اور خاص الفاظ کی تفہیم کروائیں۔	
			تفہیمی سوالات	سوال نمبر ۱ ('الف' تا 'ز') کے جوابات طلبہ سے لکھوائیں۔	
			سیاق وسباق کے حوالے سے عبارت کی وضاحت	مشق میں دی گئی عبارت کی سیاق وسباق کے حوالے سے وضاحت کریں اور طلبہ کو مشق کے طور پر سبق سے کوئی بھی عبارت گھر کے کام کے طور پر تفویض کریں۔	طلبہ متن پڑھ چکے ہیں۔
		ذخیرہ الفاظ	جملوں میں استعمال	مشق میں دیے گئے الفاظ کا طلبہ سے جملوں میں استعمال کروائیں۔	
		قواعد / گرامر	جملہ معترضہ	جملہ معترضہ کی تعریف کریں اور مثالوں سے وضاحت کریں۔ مشق کے طور پر طلبہ سے جملوں میں جملہ معترضہ کی پہچان کروائیں۔	

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۸	جگر مراد آبادیؔ		لاحقے	مشق میں دیے گئے لاحقوں سے نئے الفاظ بنائیں اور ان کے معنی لکھوائیں۔	
		قواعد / گرامر	الفاظ کے متضاد بنانا	مشق میں دیے گئے الفاظ کے متضاد طلبہ سے بنوا کر لکھوائیں۔	
			نوٹ: درسی کتاب، صفحہ ۱۴۳ پر دی گئی سرگرمی طلبہ سے مکمل کروائیں۔		
۹	ماں کی نصیحت	تفہیم	عبارت خوانی	طلبہ سے عبارت خوانی کروائیں، تلفظ پر خصوصی توجہ دیں اور خاص الفاظ کی تفہیم کروائیں۔	
			تفہیمی سوالات	سوال نمبر ۲ (الف تا ہ) کے جوابات طلبہ سے لکھوائیں۔	
			خالی جگہ پُر کرنا	گھر کے کام کے طور پر تفویض کریں۔	طلبہ متن پڑھ چکے ہیں۔
			سیاق وسباق کے حوالے سے عبارت کی وضاحت کرنا	مشق میں دی گئی عبارت کی سیاق وسباق کے حوالے سے وضاحت کریں اور طلبہ کو مشق کے طور پر سبق سے کوئی بھی عبارت گھر کے کام کے طور پر تفویض کریں۔	طلبہ متن پڑھ چکے ہیں۔
		ذخیرہ الفاظ	جملوں میں استعمال	مشق میں دیے گئے الفاظ کا طلبہ سے جملوں میں استعمال کروائیں۔	

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۷	کسان		بلند خوانی		طلبہ سے نظم کی بلند خوانی کروائیں۔	
		تفہیم	اشعار کی تشریح		خاص الفاظ کی وضاحت کرتے ہوئے شاعر اور نظم کا حوالہ دے کر طلبہ سے اشعار کی تشریح کروائیں۔	
		اصنافِ شاعری	صنعتِ تضاد		صنعتِ تضاد کی تعریف کریں اور مثالوں کی مدد سے وضاحت کریں اور مشق کے طور پر اشعار میں طلبہ سے صنعتِ تضاد کی پہچان کروائیں۔	
		ذخیرہ الفاظ	الفاظ و تراکیب کا جملوں میں استعمال		مشق میں دیے گئے الفاظ و تراکیب کو جملوں میں استعمال کروا کر لکھوائیں۔	
		قواعد / گرامر	مرکبِ اشاری		مرکبِ اشاری کی تعریف کریں اور مثالوں کی مدد سے وضاحت کریں۔ مشق کے طور پر چند مرکبِ اشاری طلبہ سے جملوں میں استعمال کروائیں۔	
	غزل(۱)		بلند خوانی		طلبہ سے غزل کی بلند خوانی اس انداز میں کروائیں کہ نثر اور نظم کا فرق واضح ہو۔	
		تفہیم	تشریح / وضاحت		خاص الفاظ کی وضاحت کرتے ہوئے شاعر کا حوالہ دے اور طلبہ سے اشعار کی تشریح کروائیں۔	

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		رموزِ اوقاف	اعراب لگانا	مشق میں دیے گئے الفاظ پر طلبہ سے اعراب اس طرح لگوائیں کہ ان کے تلفظ واضح ہوں۔	
		ذخیرہ الفاظ	الفاظ وتراکیب کا جملوں میں استعمال	طلبہ سے الفاظ کا جملوں میں استعمال کروا کر لکھوائیں۔	
		اصنافِ سخن	مزاح نگاری	مزاح نگاری کی تعریف کریں اور مثالوں سے وضاحت کریں۔	
۶	ایک کہانی بڑی پُرانی	تفہیم	عبارت خوانی	طلبہ سے عبارت خوانی کروائیں، تلفظ پر خصوصی توجہ دیں اور خاص الفاظ کی تفہیم کروائیں۔	
			تفہیمی سوالات	سوال نمبر ا تا۵ کے جوابات طلبہ سے لکھوائیں۔	
			کثیر الانتخابی سوالات	گھر کے کام کے طور پر تفویض کریں۔	طلبہ متن پڑھ چکے ہیں۔
			اقتباسات کا مفہوم	مشق میں دیے گئے اقتباسات کا مفہوم اس طرح بیان کریں کہ مشکل الفاظ اور محاورات کی وضاحت ہو جائے۔	
		قواعد / گرامر	ضرب الامثال	ضرب المثل کی تعریف کریں اور مشق میں دی گئی ضرب الامثال کا مطلب واضح کر کے طلبہ سے جملوں میں استعمال کروائیں۔	
		اصنافِ سخن	افسانہ	افسانہ کی تعریف کریں اور چند افسانوں کے نام مع افسانہ نگار طلبہ کو لکھوائیں۔	
		نوٹ: درسی کتاب، صفحہ ۳۲ پر دی گئی سرگرمی طلبہ سے مکمل کروائیں۔			

		قواعد / گرامر	سابقے	مشق میں دیے گئے سابقوں سے دو دو الفاظ طلبہ سے بنوا کر کاپیوں میں لکھوائیں۔	
		نوٹ: درسی کتاب، صفحہ ۱۰۵ پر دی گئی سرگرمی طلبہ سے مکمل کروائیں۔			
۴	غزل (۱) حسرت موہانی	تفہیم	بلند خوانی	طلبہ سے غزل کی بلند خوانی اس انداز میں کروائیں کہ نثر اور نظم کا فرق واضح ہو۔	
			تشریح / وضاحت	خاص الفاظ کی وضاحت کرتے ہوئے شاعر کا حوالہ دے کر طلبہ سے اشعار کی تشریح کروائیں۔	
		اصنافِ شاعری	غزل اور نظم میں فرق	غزل اور نظم کی تعریف کریں اور مثالوں کی مدد سے دونوں میں فرق واضح کریں۔	
			کنایہ کی تعریف	کنایہ کی تعریف کریں اور مثالوں کے ذریعے وضاحت کریں۔	
۵	مجھے میرے دوستوں سے بچاؤ	تفہیم	عبارت خوانی	طلبہ سے عبارت خوانی کروائیں، تلفظ پر خصوصی توجہ دیں اور خاص الفاظ کی تفہیم کروائیں۔	
			تفہیمی سوالات	سوال نمبر ۲ تا ۵ کے جوابات طلبہ سے لکھوائیں۔	
			کثیر الانتخابی سوالات	گھر کے کام کے طور پر تفویض کریں۔	طلبہ متن پڑھ چکے ہیں۔
		قواعد / گرامر	الفاظ کی جمع	گھر کے کام کے طور پر تفویض کریں۔	طلبہ پچھلی جماعت میں سیکھ چکے ہیں۔
			غلط فقرات کی درستی	مشق میں دیے گئے فقرات طلبہ سے درست کروائیں۔	

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		تفہیمی سوالات		سوال نمبر ۲تا۵ کے جوابات طلبہ سے لکھوائیں۔	
		جملے مکمل کرنا(سوال نمبر۱)		گھر کے کام کے طور پر تفویض کریں۔	طلبہ متن پڑھ چکے ہیں۔
۲	علامہ اقبال کا تصورِ وطنیت	الفاظ وتراکیب کا جملوں میں استعمال	ذخیرہ الفاظ	طلبہ سے الفاظ وتراکیب کا جملوں میں استعمال کروا کر لکھوائیں۔	
		ذو معنی الفاظ	قواعد / گرامر	طلبہ سے مشق میں دی گئی عبارت سے ذو معنی الفاظ تلاش کروا کر جملوں میں استعمال کروائیں۔	
		جملوں کو درست کرنا		جملوں میں دیے گئے محاورات کو طلبہ سے درست کروائیں۔	
		مضمون کے حصّے	مضمون نویسی	طلبہ کو مضمون کے بنیادی حصے (تمہید، نفسِ مضمون اور خاتمہ) سکھائیں اور مشق کے طور پر طلبہ سے کسی بھی پسندیدہ موضوع پر مضمون لکھوائیں۔	
۳	آزادی	بلند خوانی	تفہیم	طلبہ سے نظم کی بلند خوانی اس انداز سے کروائیں کہ نثر اور نظم کا فرق واضح ہو۔	
		اشعار کی تشریح		خاص الفاظ کی وضاحت کرتے ہوئے شاعر اور نظم کا حوالہ دے کر طلبہ سے اشعار کی تشریح کروائیں۔	
		مصرع مکمل کرنا		گھر کے کام کے طور پر تفویض کریں۔	طلبہ نظم پڑھ چکے ہیں۔

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COGNILIVE LEVEL	PERCENTAGE (%)	Marks
Knowledge (K)	50%	25
Understanding (U)	40%	20
Application (A)	10%	5
Total	100%	50

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Table of Specification Islamiat for Grade- X

MCQs				
Unit No	**Name of Unit**	**No. of Questions**	**Marks**	**Total Marks**
1	الجزء الاول	**05**	**01**	**05**
3	الجزء الثالث	**02**	**01**	**02**
4	الجزء الرابع	**03**	**01**	**03**
Total		**10**		**10**
CRQs				
1	الجزء الاول	**02**	**05**	**10**
3	الجزء الثالث	**01**	**05**	**05**
4	الجزء الرابع	**02**	**05**	**10**
Total		**05**		**25**
ERQs				
Unit No	**Name of Unit**	**No. of Questions**	**Marks**	**Total Marks**
1	الجزء الاول	**1/2**	**04**	**04**
3	الجزء الثالث	**1/2**	**04**	**04**
4	الجزء الرابع	**1/2 + 1/2**	**3.5+3.5**	**07**
Total		**02**		**15**

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ہدایات برائے طلبہ واساتذہ

۱۔ اس درسی کتاب میں جہاں بھی حضور پاک ﷺ کا نام مبارک آجائے تو اس کو رسول اکرم خاتم النّبیین محمد رسول اللہ ﷺ لکھا اور پڑھا جائے۔

۲۔ مذکورہ تعلیمی کیلنڈر صرف 2020-21 کیلئے ہے۔ لہٰذا رواں سال اس کیلنڈر کو مدِ نظر رکھتے ہوئے اسلامیات کی درسی کتاب پڑھائی جائے۔

۳۔ اس تعلیمی کیلنڈر میں نصاب کا جتنا حصہ دیا گیا ہے پرچہ اسی میں سے آئے گا۔

۴۔ تعلیمی کیلنڈر میں دیئے گئے درسی مواد سے متعلقہ مشقی سوالات کے جوابات لکھ دیئے جائیں۔

۵۔ سورۃ الانفال اور احادیث مبارکہ پڑھاتے وقت اساتذہ کرام پہلے خود صحیح تلفظ کے ساتھ پڑھیں اور پھر چند ایسے طلبہ سے پڑھوائیں جن کی قرأت اچھی ہو۔

۶۔ قرآن کریم کی آیات اور احادیث مبارکہ کی تشریح کرتے وقت غیر متعلقہ اور لمبی چوڑی بحث سے اجتناب کیا جائے۔

۷۔ تعلیمی کیلنڈر میں مختص شدہ نصاب کو بروقت مکمل کیا جائے تاکہ امتحان کیلئے طلبہ کی تیاری مکمل ہو۔

۸۔ طلبہ گھروں اور مساجد میں روزانہ تلاوتِ قرآن پاک کا اہتمام کریں تاکہ نصاب میں دیئے گئے ناظرہ قرآن کا حصہ بروقت مکمل ہو۔

۹۔ جہاں تک ہو سکے اختلافی نکات اور مسائل سے اجتناب کریں۔

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باب نمبر	عنوان	ہدایات برائے اساتذہ کرام
الجزء الرابع	موضوعاتی مطالعہ ۱۔ زکوٰۃ کی فرضیت ۲۔ زکوٰۃ کی اہمیت ۳۔ زکوٰۃ کے مصارف	اساتذہ کرام زکوٰۃ کی فرضیت، اہمیت اور مصارف بیان کرنے کے بعد طلبہ سے متعلقہ ایک ایک قرآنی آیت یا حدیث شریف لکھوائیں اور زبانی یاد کروائیں۔
	صبر، شکر اور ہماری انفرادی اور اجتماعی زندگی	اساتذہ کرام صبر و شکر کا معنی و مفہوم بیان کرنے کے بعد طلبہ کو بتائیں کہ انفرادی و اجتماعی زندگی پر انکے کیا اثرات مرتب ہوتے ہیں۔ ہوم ورک کے طور پر طلبہ کو مشقی سوالات ۱ اور ۲ کے جوابات لکھنے کو کہیں۔
	عائلی زندگی	عائلی زندگی کا مفہوم اور حقوق و فرائض بیان کرنے کے بعد طلبہ سے ایک ایک قرآنی آیت یا حدیث مع ترجمہ زبانی یاد کروائیں۔ ہوم ورک کے طور پر طلبہ کو مشقی سوالات ۳، ۲، ۱ اور ۴ کے جوابات لکھنے کو کہیں۔
	ہجرت و جہاد	اساتذہ کرام طلبہ کو ہجرت و جہاد کے بارے میں تفصیل سے بتائیں اور اقسام جہاد کو طلبہ سے نکات کی صورت میں لکھوائیں۔
	حقوق العباد، انسانی رشتوں اور تعلقات سے متعلق رسول اکرم خاتم النبیین محمد رسول اللہ ﷺ کی سیرت اور ارشادات	اساتذہ کرام انسانی حقوق اور حسن سلوک سے متعلق خطبہ حجۃ الوداع کے اہم نکات طلبہ سے لکھوائیں۔

باب نمبر	عنوان	ہدایات برائے اساتذہ کرام
الجزء الثالث	مِن هَدْیِ الحدیث حدیث نمبر ۱	اساتذہ کرام صحیح تلفظ کے ساتھ حدیث مبارکہ مع ترجمہ پڑھیں پھر چند طلبہ سے پڑھوائیں نیز اس حدیث میں تکمیل ایمان کے جو چار اصول بیان ہوئے ہیں انکی وضاحت کریں۔
	حدیث نمبر ۲	اساتذہ کرام حق گوئی اور سچائی کی اہمیت پر روشنی ڈالیں اور حدیث مبارکہ میں جو مثال دی گئی ہے اُسکی وضاحت کریں۔
	حدیث نمبر ۳	اس حدیث مبارکہ میں دین میں نماز کی جو حیثیت بیان کی گئی ہے۔ اُسکی وضاحت کریں اور طلبہ کو پنجگانہ نماز کی ادائیگی کی تلقین کریں۔
	حدیث نمبر ۴	اس حدیث مبارکہ کو مدنظر رکھتے ہوئے طلبہ کو خطبۂ جمعہ کے آداب سکھائیں
	حدیث نمبر ۵	اس حدیثِ مبارکہ میں جن آداب کا تذکرہ ہے طلبہ کو تفصیل سے بتائیں۔
	حدیث نمبر ۶	مسجد کی تعظیم کو مدنظر رکھتے ہوئے باجماعت نماز ادا کرتے وقت جن امور کا خیال رکھنا ضروری ہے وضاحت سے بیان کریں اور طلبہ سے نکات کی صورت میں لکھوائیں۔
	حدیث نمبر ۷ اور حدیث نمبر ۸	ان احادیث کو مدنظر رکھتے ہوئے رمضان المبارک کی فرضیت اور فضیلت بیان کریں اور طلبہ سے یہ دونوں احادیث مع ترجمہ یاد کروائیں۔
	حدیث نمبر ۹	اس حدیث کا ترجمہ و تشریح کرتے وقت اساتذہ کرام طلبہ کو یہ بھی بتائیں کہ دوران حج کن کن باتوں کو مدنظر رکھنا چاہئے۔
	حدیث نمبر ۱۰	اس حدیثِ مبارکہ کا ترجمہ و تشریح کرنے کے بعد طلبہ سے زبانی یاد کروائیں۔

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اسلامیات (لازمی) برائے جماعت دہم

باب نمبر	عنوان	ہدایات برائے اساتذہ کرام
من ھَدیِ القرآن الکریم الجزء الاول	سورۃ الاحزاب آیات نمبر ۱ تا ۸	ان آیات کو صحیح تلفظ کے ساتھ اساتذہ کرام پہلے خود پڑھیں اور پھر چند طلبہ سے پڑھوائیں اسکے بعد ترجمہ و مفہوم پڑھائیں۔
	آیات نمبر ۹ تا ۲۰	اساتذہ کرام آیات کے ترجمہ کے ساتھ ساتھ غزوہ احزاب کا تفصیلی واقعہ سنائیں۔
	آیات نمبر ۲۱ تا ۲۷	اساتذہ کرام طلبہ کو اُسوۂ حسنہ کے حوالے سے مذکورہ آیت کا تفصیلی مفہوم بیان کریں ۔
	آیات نمبر ۲۸ تا ۳۴	ان آیات کا ترجمہ و مفہوم بیان کرتے ہوئے پردے کی اہمیت کو بھی واضح کریں۔
	آیات نمبر ۳۵ تا ۴۰	اساتذہ کرام ختم نبوت کی اہمیت بیان کریں اور مذکورہ آیت طلبہ سے زبانی یاد کروائیں۔ نیز مسلمان مردوں اور عورتوں کے اوصاف نکات کی صورت میں طلبہ سے لکھوائیں۔
	آیات نمبر ۴۱ تا ۵۲	مذکورہ آیات میں حضور پاک صلی اللہ علیہ والہ وسلم کے جو اوصاف بیان ہوئے ہیں اُنکی وضاحت کریں۔
	آیات نمبر ۵۳ تا ۵۸	ان آیات میں درود پاک اور کھانے کے آداب کا تذکرہ ہے۔ ان احکامات کی روشنی میں اساتذہ کرام طلبہ کی رہنمائی فرمائیں۔
	آیات نمبر ۵۹ تا ۶۸	آیات کا ترجمہ و مفہوم بیان کرنے کے بعد طلبہ سے چیدہ چیدہ نکات نوٹ کروائیں۔
	آیات نمبر ۶۹ تا ۷۳	ان آیات کا ترجمہ و مفہوم بیان کرنے کے بعد مشقی سوالات نمبر 1 اور نمبر 2 طلبہ کو ہوم ورک کے طور پر دے دیں۔
	سورۃ الممتحنہ آیات نمبر ۱ تا ۶	ان آیات میں کن لوگوں کو راز دار بنانے سے منع کیا گیا ہے؟ نیز اس حوالے سے حضرت ابراھیم علیہ السلام نے کیا طرز عمل اختیار کیا اس پر روشنی ڈالیں۔
	آیات نمبر ۷ تا ۱۳	اساتذہ کرام ان آیات کو صحیح تلفظ کے ساتھ مع ترجمہ پڑھیں اور آسان الفاظ میں انکا مفہوم طلبہ کو سمجھائیں۔

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Islamiyat

حصّہ (ج)						
جامع سوالات (کل نمبر:24)						
لسانی مہارت	وقوفی مہارت			سوالات کی تعداد	نمبر	فی صد
	یاداشت	تفہیم	اطلاق			
نثر	-	2	-	2	10	21
شاعری (نظم/غزل)	-	4	-	4	20	42
قواعد/گرامر	-	-	2	2	18	37

جدول برائے وقوفی مہارت

وقوفی مہارت	کل نمبر	فی صد
یاداشت	28	25
تفہیم	61	55
اطلاق	22	20

مجوزہ تصریحی جدول اُردو برائے جماعت دہم (نمونہ)

حصّہ (الف)					
کثیر الانتخابی سوالات (کل نمبر:15)					
لسانی مہارت	وقوفی مہارت			سوالات کی تعداد	نمبر	فی صد
	یاداشت	تفہیم	اطلاق			
نثر	4	3		7	7	47
شاعری (نظم / غزل)	1	1	-	2	2	13
قواعد / گرامر	3	3	-	6	6	40

حصّہ (ب)						
تفہیمی / مختصر سوالات (کل نمبر:36)						
لسانی مہارت	وقوفی مہارت			سوالات کی تعداد	نمبر	فی صد
	یاداشت	تفہیم	اطلاق			
نثر	2	3	1	6	24	50
شاعری (نظم / غزل)	--	--	--	--	--	----
قواعد / گرامر	3	3	-	6	24	50

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		4.4 Symmetric functions of roots of quadratic equation 4.4.1 Symmetric function of the roots of a quadratic equation in terms of its coefficients 4.5 Formation of a quadratic equation whose roots are given	Exercise 2.4 (Q.2, 4, 5, 6)	
		4.6 Synthetic division 4.6.1 Definition of complex number	Exercise 2.5 (Q.1, 2, 4, 6)	
		4.7 Simultaneous Equations 4.7.1 Solution of one linear equation and one quadratic equation 4.7.2 Solution when both equations are quadratic	Exercise 2.6 Q.1 (i), (iv), (vi), (vii)	
		4.7.3 Real life application of a quadratic equation	Exercise 2.7 (Q.1, 2, 5, 6, 8, 9)	

		4.1.2 Determining and verifying nature of roots 4.1.3 Determining and verifying the value of an unknown nature of roots		• Selected course contents are compulsory to teach the students. • Assign examples/ questions of relevant concepts/ topics as homework task.
		4.2 Cube roots of unity and their properties 4.2.1 Cube root of unity 4.2.2 Properties of the cube roots of unity 4.2.3 Using properties of cube roots of unity to solve problems	Exercise 2.2 (Q.1, 2, 3)	
		4.3 Roots and coefficients of a quadratic equation 4.3.1 Relation between the roots and coefficients of the quadratic equation 4.3.2 The sum and the product of the roots of a given quadratic equation without solving it 4.3.3 The values of unknown(s) involved in a given quadratic equation	Exercise 2.3 (Q.1, 2, 3, 5, 6, 7)	

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MATHEMATICS GRADE-X

Unit No.	Unit	Topics/ Sub-Topics	Selected Course Contents	Guidelines for Teacher
1.	QUADRATIC EQUATIONS	3.1 Quadratic Equation 3.2 Solution of Quadratic Equations 3.3 Quadratic Formula	Exercise 1.1 (Q.1, 2, 3)	• Explain the concept of quadratic equations, methods to solve them and relevant topics by giving examples from daily life, if possible. • Selected course contents are compulsory to teach the students. • Assign examples/ questions of relevant concepts/ topics as homework task.
		3.4 Solution of Equations reducible to quadratic form	Exercise 1.2 Q.1 (i), (iii), (iv), (vi), (vii), (viii), (xi), (xiii)	
		3.5 Radical Equations	Exercise 1.3 Q.1 (i), (iv), (v), (vii), (ix) Q.2	
			Review Exercise 1 (Q.1)	
2.	THEORY OF QUADRATIC EQUATIONS	4.1 The discriminant of a quadratic equation 4.1.1 Nature of Roots of a quadratic equation through discriminant	Exercise 2.1 (Q.1, 2, 3)	• Explain the concept of discriminant, roots, their nature and relevant topics by giving examples from daily life, if possible.

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Mathematics

ہدایات برائے سالانہ امتحان 2021ء

- سالانہ امتحانی پرچہ جات برائے سال 21-2020ء اسی تعلیمی کیلنڈر میں دیئے گئے مواد (Contents) پر ہی مشتمل ہونگے۔
- امتحانی پرچہ جات میں صرف یادداشت پر مبنی سوالات نہ بنائے جائیں بلکہ سوچنے کی صلاحیتوں کی نشوونما کیلئے فہم اور اطلاق، تجزیہ اور ترکیب پر مبنی سوالات بھی شامل کئے جائیں۔
- سالانہ امتحانات کے لئے سوالات بناتے وقت خیال رکھیں کہ درسی کتاب کی مشق کے سوالات کو ہو بہو نقل کرنے کی بجائے اپنی زبان میں ان ہی تصورات پر سوال بنائے جائیں۔

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Assessment Weightage of Pakistan Studies Grade –X According to (Curriculum, 2006)

SAMPLE: TOS (TABLE OF SPECIFICATION)

Table1. Cognitive abilities assessment weightage in Pakistan Studies Grade –X Paper

Questions	Knowledge (K)			Understanding (U)			Application (A)		
	Questions	Marks	%	Questions	Marks	%	Questions	Marks	%
MCQs	5	5	50	5	5	50	-	-	-
Short Questions	1	5	14.2	6	30	85.71	-	-	-
Long Questions	-	-	-	2	15	66.66	1	7.5	33.33

Table 2. Overall assessment Percentage of (Cognitive Levels)

Cognitive Level	Percentage
Knowledge(K)	14.90
Understanding(U)	78.72
Application(A)	6.31
Total	**100**

Table 3. Chapter wise assessment weightage in Pakistan Studies Grade-X Paper

Unit No	Unit	Assessment weightage	MCQs Section-A Marks: 10		Short Questions Section-B Marks:35		Long Questions Section-C Marks:22.5	
			Question	Marks	Questions	Marks	Questions	Marks
1	History of Pakistan-II	31.91	3	3	2	10	1	7.5
2	Pakistan in World Affairs	34.04	2	2	2	10	1	7.5
3	Economic Developments	17.02	3	3	2	10	-	-
4	Population, Society and Culture of Pakistan	17.02	2	2	1	5	1	7.5
Total		**100**	**10**	**10**	**7**	**35**	**3**	**22.5**

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		• درآمدات اور برآمدات ا۔ پاکستان کی اہم برآمدات ۲۔ پاکستان کی اہم درآمدات ۳۔ تجارتی توازن • پاکستان کی اہم بندرگاہیں ا۔ کراچی بندرگاہ ۲۔ محمد بن قاسم بندرگاہ ۳۔ گوادر بندرگاہ ۴۔ خشک گودیاں	
4	باب نمبر 4 پاکستان کی آبادی، معاشرہ اور ثقافت	• پاکستان کی آبادی • شہروں اور دیہاتوں میں آبادی کا تناسب • پاکستانی معاشرہ کے خدوخال • پاکستانی معاشرہ کو درپیش مسائل • پاکستانی معاشرہ اور ثقافت (پہلی آٹھ سطور) • پاکستانی ثقافت کی مشترکہ خصوصیات ا۔ مخلوط ثقافت ۲۔ معاشرت ۳۔ لباس ۴۔ خوراک ۵۔ فنون ۶۔ دستکاریاں ۷۔ کھیل تماشے اور میلے ۸۔ شادی بیاہ کی رسمیں ۹۔ پیدائش اور موت کی رسمیں • تخلیق پاکستان میں اقلیتوں کا کردار	• طلبہ کو بنیادی اصطلاحات واضح کریں تاکہ وہ ان الفاظ یا اصطلاحات پر مشتمل مواد کو سمجھ سکیں۔ مثلاً کثیر النسلی معاشرہ، مخلوط ثقافت وغیرہ۔ • کلاس میں ان موضوعات پر بحث کے ذریعے تدریس کریں۔ • گھر کا کام سوالات کی شکل میں دیں اور طلبہ سے ان سوالات کے جوابات گھر سے لکھ کر لانے کا کہیں۔

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		۔ریاست ہائے متحدہ امریکہ • مسئلہ کشمیر • اقوام متحدہ میں پاکستان کا کردار	
3	باب نمبر 3 معاشی ترقی	• پاکستان میں معاشی ترقی (پہلی تین سطور) • معدنی وسائل (پہلی پانچ سطور) • معیشت میں زراعت کی اہمیت • پاکستان کی زرعی صلاحیت • پاکستان میں زرعی پیداوار کی کمی کے اسباب • ذرائع آبپاشی • آبپاشی کا نظام ۱۔نہری نظام ۲۔ٹیوب ویل ۳۔کنویں ۴۔کاریز ۵۔بیراج ۶۔ڈیم • صنعتیں ۔قومی ترقی میں صنعتوں کا کردار ۔گھریلو اور چھوٹے پیمانے کی صنعتیں ۔بڑی صنعتیں • توانائی کے ذرائع ۱۔تھرمل اور پن بجلی ۲۔گیس۔۳۔کوئلہ ۴۔پٹرولیم ۵۔شمسی توانائی ۶۔جوہری توانائی	• طلبہ کو چارٹس اور تصاویر کی مدد سے ان موضوعات کی تدریس کریں۔ • طلبہ کو موضوعات پر معلومات جمع کرنے کا کام دیں مثلاً پاکستان میں آبپاشی کے ذرائع پر ایک رپورٹ تیار کریں۔ • موضوعات پر سوالات بنا کر طلبہ کو گھر کا کام دیں مثلاً پاکستان کی معیشت میں زراعت کا کردار بیان کریں۔ پاکستان میں توانائی کے کون کون سے ذرائع موجود ہیں؟ کوئی سے دو ذرائع کی پیداوار اور استعمال پر بحث کریں۔

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		• جنرل پرویز مشرف کا دور حکومت ۔ مقامی حکومتیں ۔ مشرف کی اعتدال پسندی ۔ مشرف دور میں صنعت کاری اور نجکاری ۔ نجکاری کے اثرات	
2	باب نمبر2 پاکستان اور بیرونی دنیا	• پاکستان کی جغرافیائی اور سیاسی اہمیت • خارجہ پالیسی (پہلی پانچ سطور) • پاکستان کے ہمسایہ ممالک کے ساتھ تعلقات ۔ عوامی جمہوریہ چین ۔ بھارت ۔ ایران ۔ افغانستان پاکستان کے عالم اسلام کے ساتھ تعلقات ۔ عالم اسلام ۔ سعودی عرب ۔ ترکی • جنوبی ایشیا کی علاقائی تعاون کی تنظیم (SAARC) • پاکستان کے بڑی طاقتوں سے تعلقات	• گھر کا کام بھی تفویض کریں۔ • گھر کا کام سوالات کی شکل میں دیں جو واضح ہوں اور طلبہ سے کہیں کہ وہ ان کے جوابات لکھ کر لائیں۔ مثلاً پاکستان اور چین کے تعلقات بیان کریں۔ • طلبہ کی معلومات عامہ کو سبق میں استعمال میں لائیں۔ یہ ان کی سابقہ معلومات کا کام دیں گی اور موضوع کی تدریس میں دلچسپی پیدا کریں گی۔

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مطالعہ پاکستان جماعت دہم

نمبر شمار	باب	ذیلی عنوانات / عنوانات	معاون ہدایات برائے اساتذہ
1	باب نمبر 1 تاریخ پاکستان (حصہ دوم)	• ذوالفقار علی بھٹو کا دور حکومت (1977ء-1971ء) • بھٹو حکومت کی اصلاحات ۱۔ معاشی اصلاحات ۲۔ لیبر اصلاحات ۳۔ صنعتیں ۴۔ بیمہ زندگی اور بینک ۵۔ تعلیمی اصلاحات ۶۔ زرعی اصلاحات • 1973ء کا آئین ۔ تعارف ۔ 1973ء کے آئین کی اہم دفعات ۔ 1973ء کے آئین کی اسلامی دفعات • جنرل ضیاء الحق کا دور حکومت ۔ تعارف ۔ اسلامی قوانین کے نفاذ کیلئے کوشش ۱۔ زکوٰۃ و عشر ۲۔ زکوٰۃ فاؤنڈیشن ۳۔ وفاقی شرعی عدالت ۴۔ خلفاءِ راشدین، اہل بیت اور صحابہ کرامؓ کی شان میں گستاخی کی سزا ۵۔ مطالعہ پاکستان اور اسلامیات کی لازمی تعلیم ۶۔ احترام رمضان آرڈیننس ۷۔ وفاقی محتسب ۸۔ مجلس شوریٰ کا قیام ۹۔ بلاسود بنکاری • پاکستان بحیثیت ایٹمی طاقت (پہلی چار سطور)	• طلبہ کو موضوعات پر کتاب سے معلومات جمع کرنے کا کام بھی دیں۔ ان معلومات کو طلبہ کاغذ کی شیٹ پر لکھ کر تختہ تحریر پر آویزاں کریں۔ مثلاً یہ عنوان دیا جا سکتا ہے: 1973ء کے آئین کی اہم دفعات • جہاں اصطلاحات اور الفاظ کی وضاحت ضروری ہو ان کی وضاحت کریں۔

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			Review Exercise 11 (Q.1)	
12.	**ANGLE IN A SEGMENT OF A CIRCLE**	• The angle in a semi-circle is a right angle. • The angle in a segment greater than a semi-circle is less than a right angle. • The angle in a segment less than a semi-circle is greater than a right angle.	Theorems 12.3 (a), 12.3 (b) and 12.3 (c)	• Explain the concept of central angle of a circle before going to the proofs of the selected theorems. • Selected course contents are compulsory to teach the students.
			Review Exercise 12 (Q.1)	
13.	**PRACTICAL GEOMETRY - CIRCLE**	13.1 Practical Geometry 13.1.1 Locate the centre of a given circle 13.1.2 Draw a circle passing through three given non collinear points 13.1.3 (a) Complete the circle, by finding the centre when a part of its circumference is given.	Exercise 13.1 (Q.2, 4, 5, 6, 9)	• Explain the concept of construction of circle and circles attached to polygon practically on the board with the help of instruments. • Selected course contents are compulsory to teach the students.

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		a point outside it are equal in length.		
			Review Exercise 10 (Q.1)	
11.	**CHORDS AND ARCS**	• If two arcs of a circle are congruent then the corresponding chords are equal. • If two chords of a circle are equal, then their corresponding arcs (minor, major or semi-circular) are congruent. • Equal chords of congruent circles subtend equal angles at the corresponding centres. • If the angles subtended by two chords of congruent circles at the corresponding centres are equal in measure, then the chords are equal in measure.	Theorems 11.1 Case (a), 11.2 Case (a), 11.3 Case (b) and 11.4 Case (b)	• Explain the concept of major and minor arcs before going to the proofs of the selected theorems. • Selected course contents are compulsory to teach the students.

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		• Perpendicular form the centre of a circle on a chord bisects it. • If two chords of a circle are congruent, then they will be equidistant from the centre. • Two chords of a circle which are equidistant from the centre are congruent.		
			Review Exercise 9 (Q.1)	
10.	**TANGENT TO A CIRCLE**	• If a line is drawn perpendicular to a radial segment of a circle at its outer end point, it is tangent to the circle at that point. • The tangent to a circle and the radial segment joining the point of contact and the centre are perpendicular to each other. • The two tangents drawn to a circle from	Theorems 10.1, 10.2 and 10.3	• Explain the concept of secants and tangents before going to the proofs of the selected theorems. • Selected course contents are compulsory to teach the students.

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			(Q.1)	
8.	**PROJECTION OF A SIDE OF A TRIANGLE**	• In an obtuse-angled triangle, the square on the side opposite to the obtuse angle is equal to the sum of the squares on the sides containing the obtuse angle together with twice the rectangle contained by one of the sides, and the projection on it of the other.	Theorem 8.1	• Explain the concept of Pythagoras theorem before going to the proof of this theorem. • Selected course contents are compulsory to teach the students.
			Review Exercise 8 (Q.1)	
9.	**CHORDS OF A CIRCLE**	• One and only one circle can pass through three non-collinear points. • A straight line, drawn from the centre of a circle to bisect a chord (which is not a diameter) is perpendicular to the chord.	Theorems 9.1, 9.2, 9.3, 9.4 and 9.5	• Explain the concept of different parts of a circle before going to the proofs of the selected theorems. • Selected course contents are compulsory to teach the students.

		7.3.3 Trigonometric ratios 7.3.3.1 Trigonometric ratios with the help of a unit circle 7.3.4 Values of trigonometric ratios for 45°, 30° and 60° 7.3.5 Recognizing signs of trigonometric ratios in different quadrants 7.3.6 Finding the values of remaining trigonometric ratios if one trigonometric ratio is given 7.3.7 Calculate the values of trigonometric ratios of 0°, 90°, 180°, 270° and 360°	Exercise 7.4 (Q.1, 2, 3, 4, 5, 6)	
		7.4 Trigonometric Identities	Exercise 7.5 (Q.1, 2, 5, 6, 11, 12, 13, 14, 15, 16, 17)	
		7.5 Angle of elevation and depression	Exercise 7.6 (Q.1, 3, 4, 7)	
			Review Exercise 7	

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			Review Exercise 6 (Q.1)	
7.	**INTRODUCTION TO TRIGONOMETRY**	7.3 (Note: Content is missing in the textbook) 7.3.1 Sexagesimal system (Degree, Minute and Second) 7.3.2 Conversion of D°M'S" form into decimal form and vice versa 7.3.3 Circular system (Radians) 7.3.4 Relation between radians and degrees	Exercise 7.1 (Q.1, 2, 3, 4)	• Explain the concept of measurement of angles in radians and degrees, trigonometric ratios, trigonometric identities and relevant topics with the help of real life examples, if possible. • Selected course contents are compulsory to teach the students. • Assign examples/ questions of relevant concepts/ topics as homework task.
		7.4 Sector of a Circle 7.4.1 Length of an arc of circle 7.4.2 Area of Sector	Exercise 7.2 (Q.1, 2, 3, 5, 6, 7, 8)	
		7.5 Trigonometric Ratios 7.5.1 (a) The general angle (Coterminal angles) (b) Angle in standard position 7.3.2 (a) Quadrants (b) Quadrantal angles	Exercise 7.3 (Q.1, 2)	

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		6.10.2 Cumulative frequency polygon		
		6.11 Measures of central tendency 6.11.1 Calculate for ungrouped and grouped data (i) Arithmetic Mean (ii) Median (iii) Mode (iv) Geometric Mean (v) Harmonic Mean 6.11.2 Properties of arithmetic mean 6.11.3 (a) Weighted mean (b) Moving Averages 6.3.4 Estimation of Median, Mode and Quartiles graphically	Exercise 6.3 (Q.2, 3, 4, 6, 7, 8, 9)	
		6.12 Measures of dispersion (i) Range (ii) Standard Deviation (iii) Variance	Exercise 6.4 (Q.1, 3, 4, 5, 6)	

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		properties of union and intersection		• Selected course contents are compulsory to teach the students. • Assign examples/ questions of relevant concepts/ topics as homework task.
		7.1.4 Venn Diagrams	Exercise 5.3 (Q.2, 3, 5)	
		7.1.5 Ordered pairs and Cartesian product 7.2 Binary Relation	Exercise 5.4 (Q.1, 2, 4)	
		7.3 Functions 7.3.1 Domain, Co-domain and range of a function 7.3.2 Kinds of a function	Exercise 5.5 (Q.1, 4, 5, 6)	
			Review Exercise 5 (Q.1)	
6.	**BASIC STATISTICS**	6.9 Frequency Distribution 6.9.1 Construction of group frequency table 6.9.2 Histogram 6.9.3 Frequency polygon	Exercise 6.1 (Q.1, 3, 4)	• Explain the concept of frequency distribution, measures of central tendency and relevant topics with the help of real life examples, if possible. • Selected course contents are compulsory to teach the students. • Assign examples/ questions of relevant concepts/ topics as homework task.
		6.10 Cumulative frequency distribution 6.10.1 Construct a cumulative frequency table	Exercise 6.2 (Q.1, 2, 4, 6)	

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4.	**PARTIAL FRACTIONS**	4.10 Proper and Improper Rational fractions 4.11 Resolution of fraction into partial fractions Case 1: When denominator consists of non-repeated linear factors Case 2: When denominator consists of repeated linear factors	Exercise 4.1 (Q.1, 3, 4, 6, 7, 9, 10)	• Explain the concept of resolution of different types of fractions into partial fractions and relevant topics by giving examples from daily life, if possible. • Selected course contents are compulsory to teach the students. • Assign examples/ questions of relevant concepts/ topics as homework task.
		Case 3: When denominator consists of non-repeated quadratic factors Case 4: When denominator consists of repeated quadratic factors	Exercise 4.2 (Q.1, 3, 4, 7, 9, 10)	
			Review Exercise 4 (Q.1)	
5.	**SETS AND FUNCTIONS**	7.1 Some important sets 7.1.1 Operation on sets	Exercise 5.1 (Q.1, 2, 4)	• Explain the concept of sets, functions and relevant topics with the help of examples from daily life, if possible.
		7.1.2 Properties of union and intersection 7.1.3 Verification of fundamental	Exercise 5.2 (Q.1, 2, 3, 4)	

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			Review Exercise 2 (Q.1)	
3.	**VARIATIONS**	3.9 Ratio, Proportions and Variations 3.9.1 Ratio 3.9.2 Proportions 3.9.3 Variations	Exercise 3.1 (Q.1, 2, 3, 4, 5, 6)	• Explain the concept of ratio, proportions, variations and relevant topics by giving examples from daily life, if possible. • Selected course contents are compulsory to teach the students. • Assign examples/ questions of relevant concepts/ topics as homework task.
		3.10 Third, Fourth, Mean and Continued Proportion 3.11 Theorems on proportion	Exercise 3.2 (Q.1, 2, 4, 7)	
		3.12 Joint variation	Exercise 3.3 (Q.1, 3, 5, 7)	
		3.13 K-Method	Exercise 3.4 (Q.1, 2, 3, 5, 6, 7)	
		3.14 Real life problems based on variation	Exercise 3.5 (Q.1, 2, 3, 4, 5)	
			Review Exercise 3 (Q.1)	

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	• Refraction of light o Refractive index o Snell's law o Total internal reflection of light	• Lecture cum demonstration method use to explain the contents • Involve the student during demonstration on writing board • Explain by making Ray diagrams • Link with daily/classroom practical example
	• Lenses	• Lecture cum demonstration method use to explain the contents • Involve the student during demonstration on writing board • Explain by making Ray diagrams • Link with daily/classroom practical example
	• Lens equation	• Lecture cum demonstration method use to explain the contents • Involve the student during demonstration on writing board • Explain by making Ray diagrams • Link with daily/classroom practical examples
	o Short sightedness o Long sightedness	• Lecture cum demonstration method use to explain the contents • Explain by making Ray diagrams
	Exercise	Questions and problems in given exercise from above selected Topics should be answered and Solve by teacher or given as home assignments to students
Practical	• To find the refractive index of water by using concave mirror. • To determine the critical angle of glass using a semi -circular slab and a light ray box/or by prism.	
XIII. Electrostatics	o Electric charge	• Clear the concept by using figure • Lecture cum demonstration method use to explain the contents

	• Characteristics of sound o Pitch o Loudness o quality	• Apply lecture cum demonstration Method • Group discussion with students • Apply activity base method
	• Sound Intensity o Definition and mathematical equation only	• By applying demonstrations/lecture method to explain topics
	• Speed of Sound Waves o Speed of sound waves in air	• Apply the demonstration and interactive approach • Apply the inquiry approach
	• Reflection of sound waves and echo	• Apply Lecture /demonstration for explaining figures • Link with daily life examples
	o Acoustic o Introduction only	• Lecture /demonstration method • Link with daily life examples
	• Audible frequency range o Infra sound o Ultra sound	• Apply Lecture /demonstration method • Link with daily life examples
	Exercise	• Questions and problems in given exercise from above selected Topics should be answered and Solve by teacher or given as home assignments to students.
XII. Geometrical Optics	• Reflection of light o Laws of reflection	• Lecture cum demonstration method use to explain the contents • Explain figures from text book • Involve the student during demonstration on writing board
	• Spherical mirrors	• Lecture cum demonstration method use to explain the contents • Explain figures from text book • Involve the student by discussing daily life examples

Physics Grade-X

Units	Selected contents Topic/sub topic	Tips for Teacher
X. Simple Harmonic Motion	• Oscillatory motion ○ Explanation of the terms associated with oscillatory motion	• Link this topic with daily life examples • Use A.V. aid
	• Simple Harmonic Motion	• Use of A.V Aids • Apply lecture cum demonstration method
	• Motion of mass attached to a spring	• Use of A.V Aids • Explain it as an application of SHM
	• Nature of waves and their types ○ Types of waves ○ Characteristic wave parameters	• Wave parameters having similarities with terms of oscillatory motion, by comparison. • Apply inquiry approach
	Exercise	Questions and problems in given exercise from above selected Topics should be answered and Solve by teacher or given as home assignments to students
Practical	To prove that time period of a simple pendulum is independent of (i) mass of the pendulum (ii) amplitude of the vibration	
XI. Sound	• Sound waves ○ Production ○ Transmission ○ Detection	• Apply Lecture cum demonstration Method • Group discussion method • Apply inquiry approach

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Physics

Percentage (Cognitive Levels)

Cognitive Level	Percentage
Knowledge	10%
Understanding	20%
Application	70%

Percentage (Difficulty Levels)

Difficulty Level	Weightage
Easy (E)	15%
Moderate (M)	70%
Difficult (D)	15%

Table of Test Specification (Sample)

S. No.	Unit	Percentage	Section-A		Section-B		Section-C	
			No. of MCQs	Marks	No. of Questions	Marks	No. of Questions	Mark
1	Quadratic Equations	7%	1	1	1	4	-	-
2	Theory of Quadratic Equations	13%	1	1	2	8	-	-
3	Variations	6%	1	1	1	4	-	-
4	Partial Fractions	5%	1	1	1	4	-	-
5	Sets and Functions	12%	1	1	2	8	-	-
6	Basic Statistics	10%	2	2	1	4	-	-
7	Introduction to Trigonometry	11%	2	2	1	4	-	-
8	Projection of a Side of a Triangle	6%	1	1	1	4	-	-
9	Chords of a Circle	5%	1	1	-	-	1	8
10	Tangent to a Circle	6%	1	1	-	-	1	8
11	Chords and Arcs	5%	1	1	1	4	-	-
12	Angle in a Segment of a Circle	6%	1	1	1	4	1	8
13	Practical Geometry - Circle	8%	1	1	-	-	1	8
TOTAL		**100%**	**15**	**15**	**12**	**48**	**04**	**32**

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		tangent to two un-equal circles (ii) Draw transverse common tangent or internal tangent to two un-equal circles 13.3.6 (a) Draw a tangent to two un-equal touching circles (b) Draw a tangent to two un-equal intersecting circles 13.3.7 (i) Draw a circle which touches both the arms of a given angle (ii) Draw a circle which touches two converging lines and passes through a given point between them.		
			Review Exercise 13 (Q.1)	

		given point P when P is outside the arc. 13.3.2 (i) Draw a tangent to a given circle from a point P when P lies on the Circumference. (ii) Draw a tangent to a given circle from a point P when P lies outside the circle. 13.3.3 Draw two tangents to a circle meeting each other at a given angle. 13.3.4 (i) Draw direct common tangent or external tangent to two equal circles (ii) Draw transverse common tangent or internal tangent to two equal circles 13.3.5 (i) Draw direct common tangent or external		

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		hexagon about a given circle 13.2.9 Inscribe a regular hexagon in a given circle		
		13.3 Tangent to a circle 13.3.1 (i) Draw a tangent to the given arc, without using the centre, through a given point P when P is the middle point of the arc. (ii) Draw a tangent to a given arc, without using the centre, through a given point P when P is at the end of the arc. (iii) Draw a tangent to a given arc, without using the centre, through a	Exercise 13.3 (Q.1, 3, 4, 5, 6, 8)	

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		(b) Complete the circle without finding the centre when a part of its circumference is given. 13.2 Circles attached to polygon. 13.2.1 Circumscribe a circle about a given triangle 13.2.2 Inscribe a circle about a given triangle 13.2.3 Escribe a circle about a given triangle 13.2.4 Circumscribe an equilateral triangle about a given circle 13.2.5 Inscribe an equilateral triangle in a given circle		
		13.2.6 Circumscribe a square about a given circle 13.2.7 Inscribe a square in a given circle 13.2.8 Circumscribe a regular	Exercise 13.2 (Q.1, 2, 3, 4, 5, 6, 7)	

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		• Functional group containing C,H and N • Functional group containing C,H & Halogen • Double and triple bond	• Initiate discussion by writing key points
	✓ Exercise	• MCQs: 1,2,3,4,5,6,7,10 • Short questions: 1,3,4,6,8,9,10 • Long questions: Q1 part (b) only Q3 both (a)&(b) Q4 (a),(b)&(c) Q5 (a),(b)&(c)	• Discuss students exercise question by asking them • Facilitate students in answering the question
	✓ Practical	• To identify aldehyde using Fehling's test and tollen's test • To identify carboxylic acid using sodium carbonate test	• Involve students in the demonstration • Plan the experiment in advance • Demonstrate the experiment • Involve students while performing experiments
UNIT-12 **HYDROCARBONS**	✓ Introduction ✓ Alkanes	• Table 12.1 • Nomenclature • Preparation of alkanes • Hydrogenation of alkenes and alkynes • Reduction of alkyl halides • Physical Properties • Important reactions a. Halogenation b. Combustion	• Use flash cards for Nomenclature of alkanes and Chemical Reactions involved.
	✓ Alkenes	• Table 12.2 • Rules for Naming of alkenes	• Use charts showing preparation of alkene • Co-relate the rules for the nomenclature of alkane with alkene

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	✓ Salt	• Table 10.4 • Types of salts	
	✓ Exercise	• MCQs: 1,2,3,4,5,6,7,8,9 • Short questions: 1,2,4,5,6,8,9,10 • Long questions: Q1 (a)&(b) Q3 (a)&(b) Q4 (a),(b)&(c) Q5 (a)&(b)	• Ask exercise questions from students for discussion • Solve only those questions whose contents are present in current academic calendar
	✓ Practicals	i. To classify substances as acidic, basic and neutral ii. To standardize the given NaOH solution volumetrically iii. To determine the exact molarity of solution of oxalic acid volumetrically	• Demonstrate the experiment • Involve students in practical demonstration
UNIT-11 **ORGANIC CHEMISTRY**	✓ Introduction ✓ Organic compounds	• Molecular formula • Structural formula • Condensed formula • Dot and cross formula • Classification of organic compounds • Diversity and magnitude of organic compounds	• Use charts showing the key points of the topics/sub-topics • Initiate the discussion • Involve students in the discussion by asking questions • Summarize the topic/sub-topics
	✓ Alkane and alkyl radicals	• Alkane • Naming of alkane • Homologous series • Cyclo alkanes • Alkyl radicals	• Use flash cards for naming alkane • Prepare chart for homologous series and discuss it with students • Involve students in the discussion
	✓ Functional group	• Functional group containing C,H and oxygen	• Give students the homework of functional groups of alcohol, alkene, aldehyde and ketone

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CHEMISTRYGRADE-X

Unit No. and Name	Topics/Contents	Sub-topics	Guidelines for teachers
UNIT-9 **CHEMICAL EQUILIBRIUM**	✓ Introduction ✓ Reversible and dynamic equilibrium	• Graphical representation of dynamic equilibrium and its example • Forward reaction and reverse reaction	• Initiate discussion by writing key points on writing board • Give students homework of reaction of forward and reverse reactions
	✓ Law of Mass action and derivation of the expression for equilibrium constant ✓ Equilibrium constant and its units	• Law of mass action • Derivation of the expression for equilibrium constant of a general reaction • Finding values of equilibrium constant	• Write key points of the sub-topic on writing board • Initiate discussion • Involve students in the discussion by asking questions
	✓ Exercise	• MCQs: 1,2,3,4,6,8,9,10 • Short question: Q1,2,3,5,6,8,9 • Long questions: Q1(i),(ii),(iii) Q2(a)&(b) Q3 part (a) only Q4 part(a) only Q5 part(a) only	• Involve students in the discussion by asking exercise questions • Facilitate students in responding the questions
	✓ Practical	• Identify, Na, K, Sr, Ba, Cu, Ca radicals by flame test	• Demonstration • Involve students in practical • Discuss key points
UNIT-10 **ACIDS, BASES AND SALTS**	✓ Introduction ✓ Concept of Acids and Bases	• Arrhenius concept of Acids and Bases • Bronsted and lowery concept • Lewis concept of Acids and Bases	• Ask questions from students about the concept of Acid and Bases to initiate discussion • Clarify student concept by giving them corrective feedback
	✓ pH and pOH scale ✓ Neutralization reaction	• p^{H} and p^{OH} • Example No. 10.2 and 10.3	• Write key points on writing board to start discussion • Show video lecture (if possible)

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Chemistry

Table 3. Chapter wise assessment weightage in Physics Grade-X Theory Paper

Unit No	Unit	Assessment weightage	MCQs Section-A Marks: 12		Short Questions Section-B Option: 8 questions out of 11 Marks:32		Long Questions Section-C Option: 3 questions out of 4 Marks:21	
			Question	Marks	Questions	Marks	Questions	Marks
10	Simple Harmonic Motion and Waves	10	1	1	1	4	1	3
11	Sound	10	1	1	1	4	1	4
12	Geometrical Optics	10	2	2	1	4	1	4
13	Electrostatics	12	1	1	1	4	1	3
14	Current Electricity	14	2	2	2	8	1	4
15	Electromagnetism	14	1	1	2	8	1	3
16	Introductory Electronics	10	2	2	1	4	1	3
17	Information and Communication Technology	10	1	1	1	4	-	-
18	Radioactivity	10	1	1	1	4	1	4
Total	**-**	**100**	**12**	**12**	**11**	**44**	**8**	**28**

Note: This Table of specification is a sample TOS for Physics Grade-X paper.

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Assessment weightage of Physics Grade –X According to (Curriculum, 2006)

SAMPLE: TOS (TABLE OF SPECIFICATION)

Table1. Cognitive abilities assessment weightage in Physics Grade-X Theory Paper

Questions	Knowledge (K)			Understanding (U)			Application (A)		
	Questions	Marks	%	Questions	Marks	%	Questions	Marks	%
MCQs	2	2	17	9	9	75	1	1	8
Short Questions	1	4	10	9	36	80	1	4	10
Long Questions	1	3	11	3+3	9+12	74	1	4	15

Table 2. Overall assessment Percentage of (Cognitive Levels)

Cognitive Level	Percentage
Knowledge(K)	20
Understanding(U)	45
Application(A)	35
Total	100

XVIII. Radioactivity	• Atom and atomic nucleus	• Explain by making diagram/figure and then demonstrate • Show model/chart of atom /structure of atom (if available) • Lecture cum demonstration method use to explain the contents
	• Radioactivity o Nature of emission o Relative ionizing abilities o Relative penetration abilities	• Explain by making diagram/figure/table from text book and then demonstrate • Apply inquiry approach
	• Half Life	• Explain by making figure/table from text book and then demonstrate • Apply inquiry approach
	• Radioisotopes o Uses	• Explain this topic by lecture cum demonstration method • Group activities for uses of radio Isotopes and link with daily life observations
	• Nuclear Fission o Discovery o Fission Chain reaction	• Explain this topic by lecture cum demonstration method • Explain diagram/equations from text book
	• Nuclear Fusion	• Explain this topic by lecture cum demonstration method • Explain diagram/equations from text book
	• Exercise	Questions and problems in given exercise from above selected Topics should be answered and Solve by teacher or given as home assignments to students.

	• Electromagnetic Induction o Factors affecting magnitude of induced emf o Direction of induced emf and conservation of energy	• By applying activity base approach during explanation of topics • Explain by making diagram on writing board • Lecture cum demonstration method use to explain the contents
	• Mutual Induction	• Explain by making circuit diagram and then demonstrate
	• Transformer	• Explain by making circuit diagram and then demonstrate • Explain by making diagram on writing board • Show step up and step down transformer (if available)
	• Exercise	Questions and problems in given exercise from above selected Topics should be answered and Solve by teacher or given as home assignments to students.
Practical	To trace the magnetic field using a bar magnet	
XVI. Introductory Electronics	• Cathode Ray Oscilloscope (CRO)	• Explain by making circuit diagram and then demonstrate • Clear the concept by group discussion
	• Logic Gates	• Explain by making circuit diagram and truth table and then demonstrate • Involve the students during discussions
	Exercise	Questions and problems in given exercise from above selected Topics should be answered and Solve by teacher or given as home assignments to students.
Practical	To verify the truth table of OR, AND, NOT, NOR and NAND gates.	
XVII. Information and Communication Technology	• Excluded	

	• The I-V characteristic for Ohmic and non ohmic conductors	• Explain by making circuit diagram and then demonstrate • Give the examples from daily life • Tell students about ohmic and non Ohmic materials
	• Electrical power and Joule's law	• Use of writing board and explain this topics with help of circuit diagram
	• Direct and Alternating current	• Explain by making circuit diagram and then demonstrate • Give the examples of appliances which operate on AC and DC current from daily life
	Exercise	Questions and problems in given exercise from above selected Topics should be answered and Solve by teacher or given as home assignments to students.
Practical	• Verify Ohm's law (using wire as conductor). • To find the resistance of galvanometer by half deflection method.	
XV. Electromagnetism	• Magnetic effect of a steady current o Magnetic field due to a straight steady current carrying wire. o Magnetic field due to a coil or solenoid	• Explain by making circuit diagram and then demonstrate • By applying activity base approach during explanation of topics
	• Force on a current carrying conductor in a magnetic field	• Explain by making circuit diagram and then demonstrate • By applying activity base approach during explanation this topic
	• DC Motor	• Explain by making circuit diagram and then demonstrate • Show and explain the sample of D.C motor

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	○ Electrostatic induction	• Apply Lecture cum demonstration method to explain the content. • Clear the concept by using figure
	○ Electroscope	• By applying Lecture cum demonstration method • Clear the concept by using diagram • Apply Inquiry approach
	○ Coulomb's law	• Clear the concept by making figure • Apply Inquiry approach
	○ Electric field and its intensity	○ Clear the concept by using figure ○ Lecture cum demonstration method use to explain the contents
	○ Electric potential	○ Clear the concept by using figure
	○ Capacitors and combination of capacitors ○ Series combination of capacitors ○ Parallel combination of capacitors	• Clear the concept by making figure • Apply Inquiry approach • By making circuit diagram
	Exercise	Questions and problems in given exercise from above selected Topics should be answered and Solve by teacher or given as home assignments to students
Practical		
XIV. Current Electricity	○ Electric Current	• By giving daily life examples clear the concept. • Explain with daily life examples and also comparison with conventional current
	• Ohm's Law	• Explain by making circuit diagram and then demonstrate • Give the examples from daily life.
	• Combination of resistances ○ Series combination ○ Parallel combination	• Explain by making circuit diagram and then demonstrate • Give the examples from daily life. • Link with daily life examples.

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	- Halophytes	
	- Excretion in plants - Excretion of Carbon dioxide and Oxygen - Excretion of extra water (transpiration and guttation)	• Differentiate transpiration and guttation with the help of writing board.
	- Homeostasis in Humans - Lungs as homeostasis organs - Skin as homeostatic organ - Kidney as homeostatic organs	• Mini lecture • Question Answers: To clarify how Lungs, Skin and Kidney are involved in homeostasis.
	- Urinary system of Humans - Structure of Human Kidney (Renal corpuscle, renal tubule)	• Draw Fig. 11.9 on writing and explain it.
	- Process of Urine formation (Pressure filtration, reabsorption, tubular secretion) - Osmoregulation and Kidney	• Explain Fig 11.11. • Unite key points of concepts on writing board.
	- Disorder of kidney - Kidney stone - Treatment of kidney stone	• Tell students: How stone is formed in kidney? • Explain symptoms of kidney stone and write key points on writing board.

BIOLOGY GRADE-X

UNIT	TOPICS/CONTENTS	TIPS FOR TEACHERS
UNIT: 10 **GASEOUS EXCHANGE**	- Respiration, Gaseous Exchange and breathing - Gaseous exchange in plant - Gaseous exchange in Human - Mechanism of breathing - Gaseous exchange in Lungs	• Explain these concepts with the help of Fig 10.2 (a), (b), Fig 10.3 and Fig 10.4. • Ask students draw Fig 10.4 in their notebooks.
	- Respiratory Disorders - Pneumonia - Asthma	• Write symptoms and treatments of Pneumonia and Asthma on writing board.
	- Exercise	• Only the questions given in exercise are related to these topics should be solved.
	- Practical	• Activity to compare the breathing rate at rest and after exercise
UNIT: 11 **HOMEOSTASIS**	- Homeostasis the plants - Osmoregulation in plants - Mesophytes - Hydrophytes - Xerophytes	• Explain mesophytes, hydrophytes, xerophytes and halophytes • Home assignment: Ask student to write examples of mesophytes, hydrophytes, xerophytes and halophytes in their notebooks.

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Biology

Assessment weightage of Chemistry Grade –X According to (Curriculum, 2006) only for Session(2020-2021)

TOS (TABLE OF SPECIFICATION)

Cognitive Abilities Assessment Weightage in Chemistry Grade-X Theory Paper For Session (2020-2021)

Questions	Knowledge (K)			Understanding (U)			Application (A)		
	Questions	Marks	%	Questions	Marks	%	Questions	Marks	%
MCQs	2	2	17	9	9	75	1	1	8
Short Questions	1	4	10	9	36	80	1	4	10
Long Questions	1	3	11	3+3	9+12	74	1	4	15

Overall assessment Percentage of (Cognitive Levels)

Cognitive Level	Percentage
Knowledge(K)	10
Understanding(U)	78
Application(A)	12
Total	**100**

Instruction for teacher/Paper setters:

Teachers are requested to follow the above sample of specification while designing the test/paper

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TABLE OF SPECIFICATION FOR CHEMISTRY PAPER GRADE-X

S#	Unit name	Assessment weightage		MCQs (Total-12)		Short questions (Section-B) (08/11 questions) Marks-32		Long Questions (Section-C) Questions 3/4 Marks-21	
		Curriculum-2006	Adjust:	Questions	Marks	Questions	Marks	Questions	Marks
1	Chemical equilibrium	5	10	1	1	1	4	1/2 part of long question	3.5
2	Acids ,Bases and salts	7	14	2	1	2	8	1/2 part of long question	3.5
3	Organic chemistry	5	10	1	1	1	4	1/2 part of long question	3.5
4	Hydrocarbons	5	10	1	2	1	8	……	……..
5	Biochemistry	6	12	1	1	1	4	1/2 part of Long question	3.5
6	Environmental chemistry I The Atmosphere	7	14	2	2	2	8	1/2 part of long question	3.5
7	Environmental Chemistry II Water	8	16	2	2	1	4	1/2 part of Long question	3.5
8	Chemical industries	9	18	2	2	2	8	2/2 part of long question	7
Total		**52**	**104**	**12**	**12**	**11**	**44**	**04**	**28**

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		• Occurrence • Drilling of petroleum • Important Fractions of petroleum • Table 16.2	• Involve the students in the discussion
	✓ Exercise	• MCQS 2,4,5,8,9,10 • Short questions 3,4,5,6,7,9,10 • Long questions Q1 (a, b, c and d) Q4 (a, b & c) Q5 (a &b Only)	• Ask exercise question from students for discussion

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	✓ Soft and Hard Water	• Causes of hardness • Types of Hardness of water a. Temporary Hard Water b. Permanent Hard water • Methods of removing of Hardness • Disadvantages of Hard Water	• Use of charts showing Hardness, Types of Hardness of Water for discussion • Involve students in the discussion process
	✓ Exercise	• MCQs 1,2,3,4,5,7,10 • Short Questions 1,6,7,8 • Long Questions Q1 part (b) and (c) only Q2 Q3 (a,b &c)	• Ask exercise question for students for initiating discussion • Facilitate students responses
	✓ Practical	• To demonstrate the softening of water by removal of Calcium Ions from Hard water.	• Demonstration • Involve students in the performance of experiment.
UNIT-16 **CHEMICAL INDUSTRIES**	✓ Introduction ✓ Basic Metallurgical operations with reference to Copper	• Concentration of Ore • Crushing and grinding of the Ores a. Hand Picking b. Hydraulic washing c. Froth Flotation • Extraction of Metals a. Roasting (red Hot) b. Smelting (Formation of matte) c. Bessemerization • Electro-refining or purification of metals	• Write the Key points of the topic on the Writing Board to initiate discussion • Ask question from students to clarify the concept • Assign the important steps of Copper extraction to students as Home work
	✓ Petroleum Industry	• Petroleum • Origin	• Assign to students to prepare charts showing important fractions of Petroleum

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	✓ Ozone depletion and its effects ✓ Global warming	• Ozone • Occurrence of Ozone • Ozone formation • Ozone layer depletion • Causes of Ozone Layer depletion • Ozone Layer depletion • Due to NO_x • Due to nascent Oxygen • Due to SO_x • Ways to bring down Ozone Layer depletion • Effects of global warming	• Write Key points on Writing Board for discussion process. • Involve the students in discussion process • Ask students suggestions for reducing Ozone depletion • Facilitate student's responses. • Discuss the effects of global warming with students and involve them in the discussion process.
	✓ Exercise	• MCQs 1,3,4,5,6,7,8,9,10 • Short Question 1,3,4,5,6,7,8,9,10 • Long Question Q1 (a) & (b) Q3 (a) , (b) & (c) Q4 (a), (b), (c) & (d) Q5 (a), (b) ,(c) & (d)	• Only solve those exercise questions included in the current Academic Calendar • Ask exercise questions from the students
UNIT-15 **ENVIRONMENTAL CHEMISTRY- II WATER**	✓ Physical properties of water ✓ Chemical properties of water	• Thermal Stability of Water • Reaction with metals • Non-metals • Reactions with metallic oxides • Reactions with non-metallic oxides • Hydrolysis	• Use of flash cards of the reactions involved for students discussion • Facilitate students in the discussion process
	✓ Water as a universal Solvent	• Polarity of Water molecule • Hydrogen Bonding • Dielectric constant	• Write important points of the topics on writing Board to start discussion • Involve students in the discussion

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		• Sources and uses of lipids	• Assign sources, uses of Carbohydrates, Protein and Lipids as Home Work.
	✓ Exercise	• MCQs 1,2,3, 6, 7,8,9 • Short question 1,2,3,4,7,8,10 • Long question Q1, Q2, Q3	• Ask exercise questions from students • Facilitate students (when required)
	✓ Practical	• To determine that sugar decompose into elements or other compounds	• Demonstration • Involve students in the Demonstration of the Experiment
UNIT-14 **ENVIRONMENTAL CHEMISTRY-I; ATMOSPHERE**	✓ Introduction ✓ Atmosphere ✓ Composition of the atmosphere	• Atmosphere • Composition of Atmosphere	• Use charts to explain Atmosphere and its composition to start discussion • Involve and facilitate students in the discussion process
	✓ Layers of Atmosphere	• Troposphere • Stratosphere • Table 14.2 • Importance of Atmosphere	• To start discussion. • Involve students in discussion of importance of Atmosphere.
	✓ Acid rain its effects	• Acid Rain • Formation of Acid Rain • Effects of acid Rain on fishes and wild life • Effects of acid Rain on Plants and Trees • Effects of Acid Rain on Material • Effects of Acid Rain on Human • Effects of Acid Rain on Soil	• Write on writing board formation and effects of Acid rain for discussion • Involve students in the discussion process by asking questions to clarify their concepts.

		• Preparation a. Dehydration of alcohol b. Dehydrohalogenation of alkyl Halides • Physical Properties • Important Reactions a. Addition of Halogens b. Addition of Hydrogen Halides c. Addition of Hydrogen • Oxidation with $KMnO_4$	• Write the mentioned important reactions on writing board for starting discussion • Involve students in the discussion process
	✓ Exercise	• MCQs 1 to 10(All) • Short questions 1,2,,4,5,6,7,8,10	• Solve only those questions of those
	✓ Exercise	• Long questions • Q2 Part (i) only • Q3 (i) & (ii) • Q4 (a),(b), (c) & (d) • Q5 a,b & c only	• Contents presented in the academic Calendar • Ask exercise questions from students to initiate discussion • Give corrective feedback to students
	✓ Practicals	• To identify saturated and unsaturated organic compounds by $KMnO_4$ test	• Demonstration • Involve students while performing experiment
UNIT – 13 **BIOCHEMISTRY**	✓ Introduction ✓ Carbohydrates	• Classification • Sources of Carbohydrates • Uses of Carbohydrates	• Use charts explaining Carbohydrates its some sources, uses • Discuss with students the key points and involve them in the discussion
	✓ Proteins	• Amino acid as building block of proteins • Sources and uses of proteins	• Write sources, building and uses of Amino acid on writing board and initiate students discussion • Involve students in the discussion
	✓ Lipids	• Classification • Fatty Acids • Difference between fats and oil	• Use video lecture for Lipids and its classification (if Possible) • Use charts explaining key points of Lipids

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Table 3. Chapter wise assessment weightage in Biology Grade-X Theory Paper

Unit No	Unit	Assessment weightage is given in Curriculum 2006	MCQs Section-A Marks: 12		Short Questions Section-B Option: 8 questions out of 11 Marks:32		Long Questions Section-C Option: 3 questions out of 4 Marks:21	
			Question	Marks	Questions	Marks	Questions	Marks
10	Gaseous Change	8	1	1	1	4	-	-
11	Homeostasis	12	1	1	1	4	1	3
12	Coordination and Control	17	2	2	2	8	1	3
13	Support and Movement	11	1	1	1	4	1	4
14	Reproduction	14	2	2	2	8	1	4
15	Inheritance	11	1	1	1	4	1	4
16	Man and His Environment	12	2	2	1	4	1	3
17	Biotechnology	7	1	1	1	4	1	3
18	Pharmacology	8	1	1	1	4	1	4
Total	**-**	**100**	**12**	**12**	**11**	**44**	**8**	**28**

Note: The above Table of Specification is given only as sample TOS for the development of Biology-X (Theory paper).

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ASSESSMENT CRITERIA FOR FUTURE EAMINATIONS:

Assessment weightage of Biology Grade –X According to (Curriculum, 2006)

SAMPLE: TOS (TABLE OF SPECIFICATION)

Table1. Cognitive abilities assessment weightage in Biology Grade-X Theory Paper

Questions	Knowledge (K)			Understanding (U)			Application (A)		
	Questions	Marks	%	Questions	Marks	%	Questions	Marks	%
MCQs	2	2	17	9	9	75	1	1	8
Short Questions	1	4	10	9	36	80	1	4	10
Long Questions	1	3	11	3+3	9+12	74	1	4	15

Table 2. Overall assessment Percentage of (Cognitive Levels)

Cognitive Level	Percentage
Knowledge(K)	10
Understanding(U)	78
Application(A)	12
Total	100

	(Pain killers, Vaccines)	
	- Addictive drugs (Sedative, Narcotics) - Associated problems of drug addiction - Symptoms of drug addiction	• Home assignment: Ask students to write name of some addictive drugs in their notebooks. • Open discussion among students on harmful effects of drugs.
	- Antibiotics - Categories of antibiotics Sulfonamides,Tetracyclines,Cephalosporins)	• Open discussion among students on various antibiotics used in daily life.
	- Vaccine	• Mini Lecture: Tell students why vaccine is important to prevent ourselves form viral diseases.
	- Exercise	• Only questions given in exercise and are related to these topics should be solved.

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	(Fermentation as a type of cellular respiration) - Alcoholic fermentation by yeast cells - Lactic acid fermentation by bacteria	
	- Fermentation products	- Home assignment: Ask students to write names of five fermentation products in their notebooks.
	- Genetic engineering and its uses - Objectives of genetic engineering - Basic techniques in genetic engineering	• Explain basic technique in genetic engineering with the help of Fig 17.6 • Class work: Ask students write objectives of genetic engineering in their notebooks.
	- Major achievement of genetic engineering (Achievement in the field of agriculture, achievement in curing animal diseases)	• Mini Lecture on achievement of genetic engineering. • Home assignment: Ask students to write three achievement of genetic engineering in their notebooks.
	- Exercise	- Only questions given in exercise and are related to these topics should be solved.
	- Practical	- Investigation about the role of yeast and bacteria in the fermentation of flour and milk
UNIT: 18 **PHARMACOLOGY**	- Medicinal drugs - Sources of medicinal drugs - Important uses of medicinal drugs	• Mini Lecture: Medicinal drugs. • Open discussion among students about uses of medicinal drugs in daily life.

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	• Food Chain and Food web	• Explain food chain with the help of Fig 16.7 on writing board. • Classwork: Give some examples of produces, consumer and decomposers on writing board and ask students to complete their food chains. • Home assignment: Ask student to draw Fig 16.8 in their notebooks.
	- Biogeochemical Cycle - Carbon cycle	• Mini Lecture: Biogeochemical cycle. • Explain Fig 16.11 Carbon Cycle to the students on writing board.
	- Interaction in the ecosystem (Competition, Predation)	• Mini Lecture: interaction in the ecosystem.
	- Global and regional environmental problems (Deforestation and Global warming)	• Mini Lecture: Deforestation. • Explain greenhouse effect with the help of Fig 16.22.
	• Exercise	• Only questions given in exercise and are related to these topics should be solved.
	• Practical	• Investigation of an ecosystem e.g. a balanced aquarium/pond
UNIT: 17 **BIOTECHNOLOGY**	- Importance of Biotechnology - Fermentation	• Mini Lecture: Importance of biotechnology. • Explain types of fermentation with the help of Fig 17.2 on writing board.

	- Mendel's Law of inheritance - Law of segregation - Law of independent assortment	• Home assignment: After teaching law of independent assortment asks students to draw Fig 15.9 in their notebooks.
	- Variation and evaluation - Sources of variation (genetic recombination of chromosomes, crossing over, Mutation)	• Explain the process of crossing over with the help of figure 5.12 crossing over – a source of variation. • Open discussion among students on sources of variation.
	- Exercise	• Only questions given in exercise and are related to these topics should be solved.
	- Practical	• Recording the heights of class fellows to predict which kind of variation is it and presentation of the data of class fellows' heights in graphical form (either histogram or bar chart)
UNIT: 16 **MAN AND HIS ENVIRONMENT**	- Levels of ecological organization. (Species, Population, Community, Ecosystem, Biosphere)	• Explain different level of ecological organization with the help of Fig 16.1.
	- Components of an ecosystem - A biotic component of an ecosystem (Sunlight, Water, Temperature) - Biotic components of an ecosystem (Producers, Consumer, Decomposers)	• Home assignment, ask students to identify biotic and abiotic components in their surrounding. • Mini lecture on biotic and abiotic component.

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	- Formation of gametes – gametogenesis - Oogenesis - Fusion of gametes – Fertilization (External fertilization, Internal fertilization)	• Highlight differences between external fertilization and internal fertilization.
	- Need of population planning - Sexually transmitted disease - AIDS	• Mini lecture: Tell need of population planning • Home assignments: Write steps taken in Pakistan to prevent/reduce HIV epidemic in their notebooks.
	- Exercise	• Only questions given in exercise and are related to these topics should be solved.
	- Practical	• Observation of binary fission of ameba using slides, photomicrographs or charts
UNIT: 15 **INHERITANCE**	- Introduction to genetics - Chromosomes and genes - Chromatin material - Gene and allele - Role of gene in protein synthesis	• Mini Lecture: introduction to genetics. • Draw figure 15.1 on the writing board and explain the students about location and packaging of Hereditary Material (DNA) in a cell. • With the help of figure 15.2 ask students to locate gene and allele in a chromosomes. • Explain role of gene in protein synthesis with the help of Fig 15.3.
	- Mendel's work on inheritance	• Draw figure 15.8 segregation of allele on writing board and explain law of segregation to students.

	- Muscles and its types	• Home assignment: Ask students write three types of muscles in their notebooks.
	- Exercise	• Only questions given in exercise and are related to these topics should be solved.
	- Practical	• Investigation of the nature of bone (by putting three pieces of rib bone of lamb in water, NaOH and dilute HCl)
UNIT: 14 **REPRODUCTION**	- Types Reproduction (Sexual and A Sexual reproduce) - A Sexual reproduction in Unicellular Organism and Plants - Binary fission (only in Amoeba) - Multiple fission - Budding	• Briefly explain. • Explain Fig 14.2, Fig 14.3 and Fig 14.4 on writing board. • Class work: Ask students to different binary fission and multiple fission.
	- Sexual reproduction in plants - A Sexual reproduction in animals - Fragmentation - Budding - Parthenogenesis	• Explain Fig 14.12 on chart. • Explain fragmentation in planaria with the help of Fig 14.21 and budding in hydra with the help of Fig 14.22.
	- Sexual reproduction in animals	• Explain Fig 14.23 on writing board/chart.

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	- Disorders of Nervous System - Epilepsy (Fits or mirgi)	• Class work: Ask students to write causes of Epilepsy in their notebooks.
	- Exercise	• Only questions are given in exercise and are related to these topics should be solved.
	- Practical	• Observation and recording of the difference in quickness of response of the two types of coordination (by asking a student to say a few words in front of the class and observe the change in heartbeat).
UNIT: 13 **SUPPORT AND MOVEMENT**	- Human Skeleton - Axial Skeleton - Appendicular Skeleton - Role of Skeletal System	• To explain human skeleton with the help of Chart/Model. • Explain Fig 13.1
	- Composition of skeleton (Bones, Cartilage)	• Show difference between bones and cartilage on writing board. • Ask students to write this difference in their notebooks.
	- Joints - Role of Tendons and Ligaments	• Ask students to draw Fig 13.6 in their notebooks. Class work.

	- Exercise	• Only the questions given in exercise are related to these topics should be solved.
	- Practical	• Examination of the structure of kidney (sheep kidney / model)
UNIT: 12 **COORDINATION AND CONTROL**	- Coordination in organisms (only 12.1) - Human Nervous System - Neuron, Nerves - Division of Nervous System (CNS) (Central Nervous System and peripheral Nervous system)	• Explain structure of Neuron with the help of Fig 12.2 (a). • Show difference between forebrain, midbrain and hindbrain on writing board.
	- Receptors in the Human Body - Photoreceptor eye - Mechanism of vision - Disorder of the eye	• Explain Fig 12.9 on writing board/Charts. • Home assignment: Ask students to write disorders of eyes in their notebooks.
	- Muslim Scientist in Ophthalmology (Ibn Al Haitham, Ali Bin Isa)	• Tell their contribution in Ophthalmology.
	- Chemical Coordination - Human endocrine gland (Pituitary gland, thyroid gland, pancreas, Adrenal gland, Gonads)	• Mini Lecture. • Question Answers. • Home assignments: Write short note on thyroid gland in their notebooks.

				1.8 **Q. No.**(1(vi, ix, x), 2(ii, v), 3(i, iv, v)) **1.9** **MCQs: Q. No.**(2)	
2.	Factorization	4.8 Factorization 4.8.1 Definition 4.8.2 Factorization of the type: $kx + ky + kz$ 4.8.3 Factorization of the type: $ax + ay + az$ 4.8.4 Factorization of expression of the type: $a^2 \pm 2ab + b^2$ 4.8.5 Factorization of expression of the type: $a^2 - b^2$ 4.8.6 Factorization of expression of the type: $(a^2 \pm 2ab + b^2) - c^2$ 4.8.7 Factorization of expression of the type: $a^4 + a^2b^2 + b^4$ or $a^4 + 4b^4$ 4.8.8 Factorization of expression of the type: $x^2 + px + q$	2 (P # 30) 1, 3 (P # 32) 3,4 (P # 34) 1,3 (P # 35) 3 (P # 36) 2 (P # 38) 2 (P # 39) 2 (P # 40) 1 (P # 41) 2 (P # 42)	**2.1** **Q. No.**(3, 6, 10) **2.2** **Q. No.**(2, 4, 7) 2.3 **Q. No.**(3, 5, 8) 2.4 **Q. No.**(3, 4, 5, 8, 10) 2.5 **Q. No.**(3, 5, 8) 2.6 **Q. No.**(4, 6, 8) 2.7 **Q. No.**(3, 6, 7) 2.8 **Q. No.**(4, 7, 9)	Explain by writing an algebraic expression as the product of two or more algebraic expression and discuss with the students that these are the factors of algebraic expressions. Solve mentioned examples and a few exercise questions involving students and assign remaining questions of exercise as a homework assignment to the students.

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GENERAL MATHEMATICS GRADE-X

Unit No.	Unit	Topics/ Sub-Topics	Selected Course Contents		Teacher Guidelines
			Examples	Exercises	
1.	Algebraic formulae and applications	3.6 Algebraic Expression i. Rational expression behaves like a rational number ii. Definition of Rational Expression iii. Examine whether a given algebraic expression is polynomial or not and rational expression or not iv. Definition of $\frac{p(x)}{q(x)}$ as a rational expression in its lowest form v. Examine whether a given algebraic expression is in lowest form or not vi. Reduce a given rational expression to its lowest term. vii. Sum, Difference and Product of rational expression viii. Division of rational expression	1, 2, 3 (P # 3) 1, 2, 3 (P # 3) 4 (P # 6) 5 (P # 8) 2 (P # 9) 1 (P # 9) 1 (P # 10)	**1.1** **Q. No.** (1(iii, v), 2(iv, v) 3(i, vi), 4(iv, v)) **1.2** **Q.No.** (1(i, iv), 2(ii, v)) **1.3** **Q.No.** (1 (ii, v), 2 (i, iv), 3 (ii, iii), 4(I, iii), 5(ii, iii)) **1.4** **Q.No.** (3,7)	Discuss with the student's algebraic expressions, rational expressions, irrational expressions, with examples and also explain that a given rational expression p(x) / q (x) to its lowest term. Solve mentioned examples and a few exercise questions involving students and assign remaining questions of exercise as a homework assignment to the students.
		1.2 Algebraic Formulae 1.3 Surds and their applications 1.4 Rationalization	2 (P # 14) 1 (P # 14) 2 (P # 17) 1, 2 (P # 19,20) 2 (P # 21) 2 (P # 25) 4 (P # 26)	**1.5** **Q. No.**(1,(i, v), 2(ii), 3(ii, iv)) **1.6** **Q. No.**(1(iii), 2(ii), 3(ii)) **1.7** **Q. No.**(1(iii), 2(ii), 4, 5(ii), 6(i, iii), 7(iii))	

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General Mathematics

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Assessment Weightage of Computer Science Grade – X, According to (Curriculum, 2006) only for Session (2020-2021)

TOS (Table of Specification)

Table 1. Cognitive abilities assessment weightage in Computer Science Grade-X Theory paper for session 2020-2021.

Questions	Knowledge (K)			Understanding (U)			Application (A)		
	Questions	Marks	%	Questions	Marks	%	Questions	Marks	%
MCQs	01	01	9.12	08	08	72.7	02	02	18.18
Short Questions	02	08	22.22	05	20	55.55	02	08	22.22
Long Questions	01	08	33.33	02	16	66.66	--	--	

Table 2. Overall assessment percentage of (Cognitive levels)

Cognitive Level	Percentage
Knowledge (K)	20
Understanding (U)	55
Application (A)	25
Total	100%

Table 3. Chapter wise assessment weightage in Computer Science Grade – X, theory paper for session (2020-2021)

Unit No.	Unit Name	Assessment weightage	MCQs Section A Marks (11)		Short Questions Section B Marks (36)		Long Questions Section C Marks (24)	
			Question	Marks	Question	Marks	Question	Marks
1	Programming Techniques	10	01	01	01	04	--	--
2	Programming in C	10	01	01	02	08	01	08
3	Input & Output Handling	15	02	02	01	04	--	--
4	Control Structures	15	02	02	01	04	01	08
5	Loop Structures	15	02	02	01	04	--	--
6	Computer Logic & Gates	15	01	01	01	04	--	--
7	World Wide Web and HTML	20	02	02	02	08	01	08

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			Elements 7.2.4 HTML Head and Body Tags	Activity: Help students to implement book examples practically in computer lab using common tags.
		7.3 Text Formatting	7.3.1 Basics of text formatting 7.3.2 Text formatting Tags and them Use	– Present basic text formatting in HTML to students in computer lab. – Activity: Guide students to create a simple web page consisting all basic tags and formatting, as a home assignment.

GENERAL INSTRUCTIONS FOR EXERCISES:

- Exclude all questions of those topics (sub topics) which are not included in the above content.
- Above is also considered for practical notebook.

				– Activity: Help students to implement examples given in book, using Turbo-C / Borland compiler.
5	LOOP STRUCTURES	**5.1 Introduction**	5.1.1 Loop Structure 5.1.2 The *for* Loop 5.1.3 The *while* Loop 5.1.4 The *do while* Loop	– Lecture and demonstration on purpose and syntax of loop structures. – Activity: Help students to implement book examples in computer lab.
6	COMPUTER LOGIC AND GATES	**6.1 Data Representation in a Computer**	6.1 Data Representation in a Computer	– Explain how data is represented in binary form in a digital computer.
		6.2 Logic Gates	6.2.1 Digital logic and logic gates 6.2.2 Basic Logic Gates 6.2.3 Truth Table	– Describe basic building blocks of digital computer, along with functions of working of basic logic gates. – Demonstrate truth table on board and explain its working. – Activity: Guide students to design truth tables of above mentioned gates as a home assignment.
7	WORLD WIDE WEB AND HTML	**7.1 Introduction to World Wide Web**	7.1.1 Terms related to World Wide Web 7.1.2 Types of Websites	– Demonstrate introduction of world wide web and explain different types of websites by presenting examples on multimedia. Such as: social, entertainment, educational websites.
		7.2 Introduction to HTML	7.2.1 Hyper Text Mark-Up Language` 7.2.2 Creating and displaying HTML Document 7.2.3 Tags used to Mark-Up HTML	– Lecture cum demonstration about scripting in HTML language and its importance in www. – Practically create and display a simple HTML page. – Explain concept of Tags and how these are used in HTML script.

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	INPUT & OUTPUT HANDLING		3.1.2 Input Functions 3.1.3 Statement Terminator (Semicolon) 3.1.4 Format Specifiers 3.1.5 Escape Sequences	– Explain purpose of input functions and their uses i.e. scan (), getche(), getchr(), gets() and Cin functions with practical. – Describe, why and where format specifiers are used in C-language, practically demonstrate the use of format specifiers. – Enlist different escape sequences on board, with examples that how it is used in output string. – Activity: Ask student to implement a simple "hello world" program using different escape sequences.
		3.2 Operators	3.2.1 Arithmetic Operators 3.2.2 Assignment Operator (=) 3.2.3 Compound Assignment Operators 3.2.4 Increment operator (+ +) 3.2.5 Decrement operator (- -) 3.2.6 Relational Operators 3.2.7 Logical Operators 3.2.8 Difference Between the assignment operators (=) and equal to operators (= =) 3.2.11 Operators and their Precedence	– Lecture cum demonstration about use of arithmetic, assignment and compound assignment operators in C-language. – Activity: implement different arithmetic operators in a simple C-language program. – How to use increment and decrement operator by using Prefix and Postfix with practical implementation. – Enlist Different Relational operators (>, <, ==,>=, <=) etc. along with its purpose. Activity: Implement relational operators in C program. – Activity: differentiate between use of assignment and equal to operator using C program, ask students to practice in lab. – Give home task to students to learn operator precedence applying basic mathematic rules.
4	CONTROL STRUCTURES	**4.1 Control Structure**	4.1.1 Control Statement 4.1.2 Conditional / Selection Statements 4.1.3 *if* statement 4.1.4 *if-else* statement 4.1.5 The *switch* statement	– Explain the purpose and syntax of control structures in detail. – Introduction to conditional statements and their purpose. – Explain purpose and syntax of: if statement, if else, and switch statement.

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				– Explain how a program is executed and explain difference between compiling and interpretation of a computer program.
		2.2 Programming Environment	2.2.1 Integrated Development Environment (IDE) 2.2.2 Modules of the C Programming Environment	– Practical demonstration of any common IDE related to C and C++, also explain different modules of a particular IDE i.e. Linker, Debugger, Compiler, Loader etc. in computer lab. – Assign homework to draw C-language IDE diagram.
		2.3 Programming Basics	2.3.1 Header File 2.3.2 Reserved words 2.3.3 Basic structure of C Program	– Introduction of Header files and its purpose in any computer program. – Explain why reserve words are used and their importance. – Lecture cum demonstration on constructing a basic C language program and its syntax in computer lab.
		2.4 Variables and Constants	2.4.1 Variables 2.4.2 Constants 2.4.3 Rules of writing Variables Names 2.4.4 Data types used in C-Language 2.4.6 Constant Qualifier – Const 2.4.7 Declaration and Initialization of Variables	– Define and explain variable and constant also elaborate their purpose in any language, by giving daily life examples. – Question answer session regarding difference between constants and variables. – Explain variable declaration rules and give home task to define 5 different variables according to rules learned. – Common examples of variables to be presented to students of different data types, ask students to create their own self defined variables. – Demonstration in computer lab, how to initialize a constant and variables of different data types. – As homework, Ask students to define and initialize multiple constants and variables of each common data type.
3		**3.1 Input / Output Functions**	3.1.1 Output Functions	– Lecture cum demonstration on use of print (), puts (), and Cout functions and practical execution in computer lab.

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COMPUTER SCIENCE GRADE-X

Unit No.	Unit Name	Topic	Sub-topic / Content	Teacher Guide lines
1.	PROGRAMMING TECHNIQUES	**1.1 Understanding The Problem**	1.1.1 The Problem 1.1.2 Problem Analysis 1.1.3 Planning the Solution of Problem 1.1.4 Candid Solution of a Problem 1.1.5 Selecting the Best Solution	– Define a problem, problem analysis and how to plan a solution by giving common examples for better understanding of students. – Demonstration about finding the best solution amongst different solutions. – Activity: Give a daily life problem to students and ask them to propose different solutions as homework
		1.3 Flowchart	1.3.1 A Flowchart 1.3.2 Importance of a Flowchart for Solving a Problem 1.3.3 Flowchart Requirements 1.3.4 Flowchart Symbols 1.3.5 Flowcharts to Solve Problems	– Teacher will explain introduction of flowchart and its benefits towards programming. – Demonstrate why flow chart is important for finding best solution of a particular problem, and what are the initial requirements for designing a flowchart. – Explain flow symbols by drawing on board and let students to learn symbols and their working by self-drawing. – For clarification give task to students for making flowchart diagram for solving daily life example as a home work.
2.	PROGRAMMING IN C	**2.1 Introduction to Programming**	2.1.1 Computer Program 2.1.2 Program Languages 2.1.3 Characteristic of High Level 2.1.5 Compiler and Interpreter	– Define and explain computer program, and its importance, also explain of computer program with flow chart. – Explain Introduction of different programming languages and their application in solving problems. – Explain Pros and cons of high level languages and comparison with low level languages.

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		8.7 Introduction 8.7.1 To draw a tangent to two unequal touching circles 8.7.2 To draw a tangent to two intersecting circles	Example (P # 238)		
9.	Areas and Volumes	11.1 Pythagoras Theorem	1 (P # 244)	**9.1** **Q. No.**(2, 8)	For the concept of Pythagoras theorem and its application draw right angle triangle on the writing board and discuss with the students in the Pythagoras theorem $(\text{Hypotenuse})^2 = (\text{base})^2 + (\text{perpendicular})^2$. Also explain the concept of area, area of a square, triangle, circle, parallelogram and rectangle. Solve mentioned examples and a few exercise questions involving students and assign remaining questions of exercise as a homework assignment to the students.
		11.2 Introduction 11.2.1 To find the area of a triangle by applying Hero's formula 11.2.2 To find the area of a triangle when base and altitude are given 11.2.3 To find the area of an equilateral triangle when measure of its sides is given 11.2.4 To find the area of a rectangle when its two sides are given 11.2.5 Area of parallelogram when base and altitude are given 11.2.6 Area of a square when its side is given	1 (P # 247) 1 (P # 248) 2 (P # 250) 1 (P # 252) 3 (P # 253) 2 (P # 255) 1 (P # 256) 1 (P # 258) 1 (P # 259) 3 (P # 263) 1 (P # 264) 4 (P # 267) 7 (P # 269)	**9.2** **Q. No.**(2, 4, 5, 6) **9.3** **Q. No.**(3(iii), 4(iii), 5, 9, 12) **9.4** **Q. No.**(1, 5) **9.5** **Q. No.**(1(iv), 2(iii), 3(i), 5, 8) **9.6** **Q.No.** (1, 6, 9, 13)	

		8.4.3 To construct a parallelogram when two adjacent sides and the angle included between them are given			construction steps is very important for the construction of figures drawing. Draw the figures step wise student should also follow these steps on their notebooks. Solve mentioned examples and a few exercise questions involving students and assign remaining questions of exercise as a homework assignment to the students.
		8.5 To locate the center of a given circle	Example (P # 232)		
		8.6 To draw a circle passing through three given non-collinear points		**8.4** **Q. No.**(3, 8) **8** **MCQs: Q. No.**(3)	
		8.5.1 To draw a tangent to a given circle from a point which lies on the circumference 8.5.2 To draw a tangent to a given circle from a point which lies outside the circle	Examples (P # 233)		
		8.6.1 To draw direct common tangent to two equal circles 8.6.2 To draw direct common tangent to two unequal tangent to two unequal circle 8.6.3 To draw transverse common tangent to two equal circles 8.6.4 Draw transverse common tangent to two unequal circles	Example (P # 234, 235, 236, 237)		

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		7.6.4 Arc, minor arc and major arc 7.6.5 Semi-circle 7.6.6 Segment of a circle 7.6.7 Sector of a circle 7.6.8 Secant of a circle 7.6.9 Concyclic points 7.6.10 Tangent to a circle 7.6.11 Concentric circle 7.6.12 Central angle 7.6.13 Inscribed circle 7.6.14 Properties of a circle			of a circle and tangent of a circle and explain their attributes. Solve mentioned examples and a few exercise questions involving students and assign remaining questions of exercise as a homework assignment to the students.
8.	Practical geometry	8.5 Introduction 8.5.1 Construction of triangle 8.1.3 Draw angle bisector of a triangle 8.1.4 To draw the altitudes of a triangle 8.1.5 To draw perpendicular bisector of a triangle	1 (P # 221) 3 (P # 222) 5 (P # 223) Example (P # 225, 228)	**8.1** **Q. No.**(1(i,iii,), 2(ii), 3(ii), 4(i,iii)) **8.2** **Q. No.**(1(ii), 2(iii), 3(ii), 4(iii))	Discuss with students that in the construction of figures the most important thing is to draw any component of the figure and explain it in the form of statement, also sequential order of
		8.4 Construction of quadrilateral 8.4.1 To construct a rectangle when its diagonal and one side are given 8.4.2 To construct a square when its diagonal is given	1 (P # 230) Examples (P # 231)	**8.3** **Q. No.**(1(ii), 3)	

		7.10.5 Similar triangles			questions involving students and assign remaining questions of exercise as a homework assignment to the students.
		7.11 Congruent triangles 7.4.1 Test for congruence of triangles		**7.4** **Q. No.**(2)	Draw congruent and similar triangle on writing board and ask students to differentiate between them. Solve mentioned examples and a few exercise questions involving students and assign remaining questions of exercise as a homework assignment to the students.
		7.5 Quadrilaterals 7.5.1 Square 7.5.2 Rectangle 7.5.3 Parallelogram		**7.5** **Q. No.**(1, 2, 3, 6, 9, 11) **Exercise 7** **MCQs: Q. No.**(1 to 33)	Draw quadrilaterals squares, rectangle, parallelogram and explain their attributes. Solve mentioned examples and a few exercise questions involving students and assign remaining questions of exercise as a homework assignment to the students.
		7.6 Circle 7.6.1 Radial segment and radius 7.6.2 Circumference of a circle 7.6.3 Chord and diameter			Draw circle, explain its radius, diameter, circumference, minor and major arc, sector of a circle, secant of a circle, segment

		7.6.3 Supplementary angles 7.6.4 Vertical or opposite angles 7.6.5 Calculating unknown angles 7.6.6 Interior and Exterior angles of a triangle	5 (P # 165)	**Q. No.**(1(ii, iv, v), 2(iv), 3(iv), 4(ii, iv), 5(ii, iii), 7, 8, 10)	exterior, supplementary and complementary of a triangle involving students. Solve mentioned examples and a few exercise questions involving students and assign remaining questions of exercise as a homework assignment to the students.
		7.9 Introduction 7.9.1 Co-planer lines 7.9.2 Parallel lines 7.9.3 Transversal line 7.9.4 Properties of parallel lines 7.9.5 Angles formed by transversal lines 7.9.6 Corresponding angles 7.9.7 Alternate interior angles 7.9.8 Vertically opposite angles 7.9.9 Interior angles 7.9.10 Relation between angles when two parallel lines are intersected by a transversal		**7.2** **Q. No.**(2, 3, 4, 8)	Initiate the topic that co-planer are those lines which are in the same plane, similarly draw figures for parallel lines, transversal line and also explain the properties of parallel lines. Similarly draw figures showing corresponding angles, alternate angles minor arcs and major arcs. Solve mentioned examples and a few exercise questions involving students and assign remaining questions of exercise as a homework assignment to the students.
		7.10 Introduction 7.10.1 Congruent and similar figures 7.10.2 (1-1) correspondence 7.10.3 Congruent figures 7.10.4 Similar figures		**7.3** **Q. No.**(1, 2)	Draw congruent and similar figures on writing board and differentiate between congruent and similar figures. Solve mentioned examples and a few exercise

		6.16.3 Right distributive law of multiplication over addition 6.16.4 Commutative law under multiplication 6.16.5 Multiplicative identity			mentioned examples and a few exercise questions involving students and assign remaining questions of exercise as a homework assignment to the students.
		6.17 Multiplicative Inverse of matrix 6.17.1 Determinant of matrix 6.17.2 Evaluation of the determinant of matrix 6.17.3 Singular matrix 6.17.4 Non-singular matrix 6.17.5 Adjoint of Matrix 6.17.6 Inverse of matrix	1 (P # 147)	**6.5** **Q. No.**(1(ii, iv, ix), 2(iii, vi), 3, 4, 5(ii, vi))	Explain that multiplicative inverse, Determinant, singular, non-singular, adjoin and inverse of the matrices with examples. Solve mentioned examples and a few exercise questions involving students and assign remaining questions of exercise as a homework assignment to the students.
		6.18 Solution of simultaneous linear equations 6.18.1 Solution of simultaneous linear equations by using matrices 6.18.2 Cramer's rule	Example (P # 151) Example (P # 153)	**6.6** **Q. No.**(1(I, iv), 2(ii, iv) 4, 6) **6.7** **MCQs: Q. No.**(3)	Solve one mentioned example for the solution of simultaneous linear equation on the writing board and a few mentioned questions of exercise and assign the remaining questions as a homework.
7.	Fundamentals of Geometry	7.6 Introduction 7.6.1 Adjacent angles 7.6.2 Complementary angles	1 (P # 162) 2,3 (P # 163)	**7.1**	Draw figures on the writing board showing adjacent, vertically, opposite, interior,

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		6.14.3 Square Matrix 6.14.4 Rectangular Matrix 6.14.5 Zero or Null Matrix 6.14.6 Identity Matrix 6.14.7 Scalar Matrix 6.14.8 Diagonal Matrix 6.14.9 Transpose of Matrix 6.14.10 Symmetric of Matrix 6.14.11 Skew-Symmetric Matrix		**Q. No.**(1(ii, iv), 2 (i, v), 3(i, ii, viii, x), 4(iii, vii), 5(I, iii, v), 6(I, iv), 7(ii, iv), 8(iii, iv))	mentioned examples and a few exercise questions involving students and assign remaining questions of exercise as a homework assignment to the students.
		6.15 Operation of Addition, Subtraction and Scalar Multiplication of Matrices 6.15.1 Rule for Addition or Subtraction of Matrices 6.15.2 Addition of Matrices 6.15.3 Scalar Multiplication 6.15.4 Subtraction of Matrices 6.15.5 Commutative and Associative Laws under Addition 6.15.6 Associative law under Addition 6.15.7 Additive Identity of a Matrix 6.15.8 Additive Inverse of a matrix	5 (P # 123) Example (P # 124, 125, 127) 1 (P # 129)	**6.3** **Q. No.**(1(ii, iii), 2(iii), 3, 4(iii), 5(iii))	Initiate on the writing board that the matrices having same order or confirmable for addition or subtraction. Solve mentioned examples and a few exercise questions involving students and assign remaining questions of exercise as a homework assignment to the students.
		6.16 Multiplication 6.16.1 Multiplication of two or three matrices 6.16.2 Left distributive law of multiplication over addition	2 (P # 134) Example (P # 138, 139, 140)	**6.4** **Q. No.**(1(i, iv), 2, 3, 5)	Explain that the multiplication of matrices and which matrices are confirmable for multiplication or not involving students. Solve

		7.5 Solution of Quadratic Equations	2, 3 (P # 103, 104) Example (P # 105)	**5.2** **Q. No.**(1(ii, iv), 2(ii, vi))	examples of quadratic equations on writing board involving students. Also discuss the different method of solution of quadratic equation i.e. factorization method, completing square method and quadratic formula. Solve mentioned examples and a few exercise questions involving students and assign remaining questions of exercise as a homework assignment to the students.
		7.6 Solution of Quadratic Equation by Quadratic Formula		**5.3** **Q. No.**(3, 5, 7)	
		7.7 Simple Real-life Problems on Quadratic Equations	2 (P # 109)	**5.4** **Q. No.**(2, 4, 5) 5.5 **MCQs: Q. No.**(3)	
6.	Matrices and Determinants	6.13 Introduction of Matrices 6.13.1 Definition of Matrix 6.13.2 Rows and Columns of Matrix 6.13.3 Order of Matrix. 6.13.4 Equality of Matrices	1, 2 (P # 114) 2 (P # 115)	**6.1** **Q. No.**(1(iii,iv), 2(ii,iii, v))	Initiate the topic that matrices are forms of charts in which the entries are made in squared brackets and then introduced the students with the concept of matrix, solve mentioned examples and a few exercise questions involving students and assign remaining questions of exercise as a homework assignment to the students.
		6.14 Type of Matrices 6.14.1 Row Matrix 6.14.2 Column Matrix		**6.2**	Write the different types of matrices on writing board involving students. Solve

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		3.16.1 Addition and Subtraction of Algebraic Fractions 3.16.2 Product of Fractions 3.16.3 Division of Fractions	2 (P # 68)	3.4 **Q. No.**(4, 7, 8)	we select least common multiple it is called as L.C.M. Solve mentioned examples and a few exercise questions involving students and assign remaining questions of exercise as a homework assignment to the students.
		3.17 Square roots of Algebraic Expressions	2 (P # 70)	**3.5** **Q. No.**(2, 5, 8, 9) 3.6 **MCQs: Q. No.**(3)	
4.	Linear equations and inequalities				Discuss with students the general form of linear equation, equations involving radicals, equations involving absolute values and process of their solution. Solve mentioned examples and a few exercise questions involving students and assign remaining questions of exercise as a homework assignment to the students.
		4.12 Linear Equations 4.12.1 Introduction 4.12.2 Solution of Linear Equations 4.12.3 Solution of Equations involving Radicals	1, 2 (P # 78, 79) 2 (P # 82)	4.1 **Q. No.**(2, 6, 8, 11) 4.2 **Q. No.**(3, 6, 8)	
		4.13 Equations involving Absolute Value 4.13.1 Absolute Value 4.13.2 Solution of Equations involving Absolute Value	2 (P # 88)	4.3 **Q. No.**(2, 6, 8)	
		4.14 Linear Inequalities 4.14.1 Properties of Inequalities (P # 90)	3 (P # 89) 6 (P #90)	**4.4** **Q. No.**(4, 6,10)	
		4.15 Solution of Linear Inequalities	2, 3 (P # 93)	**4.5** **Q. No.**(2, 7, 9, 12) **4.6** **MCQs: Q. No.**(3)	
5.	Quadratic equations	7.4 Definition of Quadratic Equations		**5.1** **Q. No.**(1(ii, iv, vi), 2(ii, iv))	Write general form of quadratic equation and few

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		4.8.9 Factorization of expression of the type: $ax^2 + bx + c$ 4.8.10 Factorization of expression of the type: $a^3 + 3a^2b + 3ab^2 + b^3$ and $a^3 + 3a^2b + 3ab^2 - b^3$ 4.8.11 Factorization of expression of the type: $a^3 + b^3$ and $a^3 - b^3$		2.9 **Q. No.**(2, 5, 7) 2.10 **Q. No.**(2, 4, 5, 9)	
		4.9 Remainder Theorem and Factor Theorem 4.9.1 Remainder Theorem 4.9.2 Zero of a polynomial 4.9.3 Factor Theorem	1, 2, 3 (P # 43, 44)	**2.11** **Q. No.**(1, 4)	
		4.10 Factorization of a Cubic Polynomial	1 (P # 47) 3 (P # 48)	2.12 **Q. No.**(4, 6, 8) 2.13 **MCQs: Q. No.**(3)	
3.	Algebraic manipulation	3.15 Highest Common Factor and Least Common Factor 3.15.1 Highest Common Factor 3.15.2 Least Common Multiple 3.15.3 Relation between H.C.F and L.C.M	2, 3, 4 (P # 54,55,56) 2 (P # 59) 3 (P # 60) 6 (P # 63)	3.1 **Q. No.**(2, 5, 8, 10) 3.2 **Q. No.**(1, 4, 6, 9, 10)	Discuss with students that while factorizing algebraic expressions some of their factors may be common and when we take highest common factor among all of these factors then it is called H.C.F. Similarly, in the multiples of two or more algebraic expression when
		3.16 Basic Operations of Algebraic Fractions	3 (P # 66) 2 (P # 67)	**3.3** **Q. No.** (3, 5, 7)	

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			➢ Show the pictures or videos of wastes disposal by burning etc in your mobile to the students if possible. ➢ Aware the students about the harmful effects of the improper treatment of wastes. **Homework:** Write the summary of these topics at home.
		Effective Disposal Methods • Reducing the use of hazardous materials • Reuse and recycle • Disposal of wastes in land based disposal areas	➢ First aware and motivate the students about the control of pollution. ➢ Then use mini lecture for different effective disposal methods. ➢ Show animations if possible. **Homework:** Ask students to write different disposal methods briefly in notebook.
		Exercise	➢ Solve all the questions related to these selected topics.
08	**Biotechnology**	**Introduction** • Nature of hereditary material • Nucleus • Nucleolus • Function of Nucleus	➢ Use flash cards to introduce topic ➢ Arrange a short quiz on "Genetics" ➢ Use "Cytology" application from play store (if possible) ➢ Initiate discussion on "Hereditary" with some provoking questions **Homework:** Draw a detailed and labeled diagram of "Cell"
		Molecular basis of Heredity • Chemical composition of DNA • Structure of DNA • Genetic diseases • Thalassemia	➢ Use physical model or chart of "DNA" to explain concept of "DNA". ➢ Aware & motivate students about "blood donation" **Homework:** Write a detailed note on "DNA"

		Scientific Nomenclature and common consumer products	➢ Initiate discussion on nomenclature. ➢ Give daily life examples of chemical products. **Home Work:** Make a list of common names and chemical names in the note book.
		How to read a label	➢ Ask the students to bring labels of different items and explain the ingredients, present on the labels and then after observation, initiate discussion. **Home Work:** Ask the students to collect and paste ten different labels in their note books and also write their ingredients
		Fabric and hair dyeing	➢ Ask the students about the color of hair and other different things in the classroom. ➢ Then explain the importance of dyes and dying process with examples. **Homework:** Ask students to write a note on hair dying in their notebook.
		Pulp and paper	➢ Deliver a mini lecture on the importance of trees and paper. ➢ Write the main points of paper making procedure on the writing board. ➢ Explain with questions answer technique. **Homework:** Ask students to Prepare five mcqs in this topic.
		Disposal of waste chemicals ➢ Methods of disposal of wastes in Pakistan ➢ Impacts and safety consequences of chemical disposal	➢ Deliver a detailed lecture on hazardous chemical wastes generation in industries and houses.

		e. Fuse f. Circuit breaker g. Outlets	**Homework:** Ask students to prepare a chart of household wiring electric circuit components.
		➢ Electric safety measures ➢ Careers in electrical technology	➢ Write key points in bullets on writing board ➢ Discuss each measure briefly and encourage students to ask questions ➢ Write topics on writing board and start question answer session. **Homework:** Write answer of question 6 in (c) in exercise
		Exercise	➢ Solve all the questions related to these selected topics.
07	**Chemical reactions and their practical applications**	**Introduction** **Indications of a chemical reaction**	➢ Use an experimental activity for Indication of a chemical reaction. ➢ Focus on the examples to strengthen the concepts **Homework:** Ask students to write five examples of chemical reactions in their notebooks.
		Some chemical reactions in everyday life • Photosynthesis	➢ Initiate discussion on the use of chemical products (soap, toothpaste, shampoo etc) in daily life. ➢ Ask the students to bring a plant and then discuss the role of leaves, roots and light in the process of photosynthesis. **Homework:** Draw the diagram showing photosynthesis.

GENERAL SCIENCE GRADE-X

UNIT	UNIT NAME	CONTENTS	TIPS FOR TEACHERS
06	Electricity in everyday life	**Static charge** ➢ Building up static charge in term of electron transfer ➢ Production of static charge in terms of electrostatic **Practical application of static electricity** • Electrostatic painting • Electrostatic precipitators for pollution control	➢ Deliver a mini lecture on static charges and explain building up of electrostatic charges and production of electrostatic charges with the help of diagram. ➢ Initiate topic of practical application of static energy by writing on writing board. ➢ Show animation if possible for better understanding of concepts. ➢ Present household appliances in classroom and then initiate discussion by question answer technique. **Homework:** Ask students to prepare a detail note on application of electricity in household appliances.
		Current Electricity **Application of current electricity in household appliances.** **Problems related to electrostatic charge and their solution** • Lighting and use of lightning rods • Building up electro static charge on vehicle and using static strops	➢ Initiate your discussion on the topic by asking some question from students then take some key points on writing board and explain each point. ➢ Write problems in bullet form on writing board and discuss these in detail **Home work:** Ask students to solve Q (5) (C) in exercise.
		Household wiring ➢ Electric circuit component of household wiring a. Resisters b. Resisters in series c. Resisters in parallel d. Switch	➢ Draw and present physically components of household wiring. ➢ Initiate discussion on topic with question answer technique

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General Science

Table 3. Chapter wise assessment weightage in General Mathematics Grade-X

Unit No	Unit	Assessment weightage	MCQs Section-A Marks: 20%			Short Questions Section-B Marks: 48%			Long Questions Section-C Marks: 32%		
			K	U	A	K	U	A	K	U	A
1	Algebraic formulae and applications	15	2%				5.33%				5.33%
2	Factorization	15	2%				5.33%				
3	Algebraic manipulations	8	2%				5.33%				5.33%
4	Linear Equations and inequalities	7	2%				5.33%				
5	Quadratic equations	8		2%			5.33%				
6	Matrices and determinants	8		2%			5.33%				5.33%
7	Fundamentals of Geometry	9		2%			5.33%				5.33%
8	Practical Geometry	10	2%					5.33%			5.33%
9	Areas and Volumes	10	2%								
10	Introduction to coordinate Geometry	10	2%					5.33%			5.33%
Total		**100**	**20%**			**48%**			**32%**		

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Assessment weightage of General Mathematics Grade –X According to (Curriculum, 2007) for future use

TOS (TABLE OF SPECIFICATION)

Table1. Cognitive abilities assessment weightage in General Mathematics Grade-X

Questions	Knowledge (K)			Understanding (U)			Application (A)		
	Questions	Marks	%	Questions	Marks	%	Questions	Marks	%
MCQs	10	10	13	5	5	7			
Short Questions				6	24	32	3	12	16
Long Questions							3	24	32

Table 2. Overall assessment Percentage of (Cognitive Levels)

Cognitive Level	Percentage
Knowledge(K)	13
Understanding(U)	39
Application(A)	48
Total	100

		10.5.2 Use distance formula to show that given three (or more) points are collinear 10.5.3 Use of distance formula in showing that given three non-collinear points form an equilateral /an isosceles/a scalene/ a right angled triangle.		**10** **MCQs: Q. No.** (3)	coordinate is positive but the y coordinate is negative. Solve mentioned examples and a few exercise questions involving students and assign remaining questions of exercise as a homework assignment to the students.

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		11.3.8 Right circular cone 11.3.9 Finding the volume of the right circular cone 11.3.10 Sphere and semi-sphere 11.3.11 Volume of a hemisphere and sphere			
10.	Introduction to coordinate Geometry	10.1 Coordinate Geometry 10.4.1 The coordinate lines and the coordinate plane 10.4.2 Coordinate of a point in Cartesian plane 10.4.3 Quadrants 10.4.4 Derivation of distance formula between two given points in a given cartesian plane 10.4.5 To find the distance between two points by using distance formula	2 (P # 296) Example (P # 298)	**10.1** **Q. No.** (3, 4(iii, vi))	Explain co-ordinate plane as two-dimensional plane in terms of two directed lines x'x and y'y that are perpendicular and intersect each other at a point 0. X'OX is called X-axis, while Y'OY is called Y-axis. Point of intersection is called origin. Also explain that co-ordinate plane is divided in two four quadrent, in first quadrant xy are positive. In second quadrant x is negative but the y-coordintate is positive, in third quadrant both co-ordinates are negative and in fourth quadrant x
		10.5 Collinear Points 10.5.1 To distinguish between collinear and non-collinear points	1 (P # 302) 2 (P # 303) Example (P # 305)	**10.2** **Q. No.** (1(iii, ix), 4) **10.3** **Q. No.** (1(iv), 2(ii), 3(i), 4(iv))	

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		11.2.7 To find the area of four walls of a room when its length, width and height are given 11.2.8 Find the cost of turfing a square / rectangular field 11.2.9 To find the cost of paving the footpath around a rectangular path 11.2.10 To find the area of a circle and semi circle when radius is given 11.2.11 To find the area enclosed by two concentric circles whose radii are given 11.2.12 Word problems related with areas of a triangle, rectangle, square, parallelogram and circle			
		11.3 Introduction 11.3.1 Volume 11.3.2 Cube 11.3.3 Cuboid 11.3.4 Find the volume of a cube when its edge is given 11.3.5 Finding the volume of cuboid when its length, breadth and height are given 11.3.6 Right circular cylinder 11.3.7 Finding volume of a right circular cylinder	1 (P # 272) 2 (P # 273) 2 (P # 274) 1 (P # 275) 2 (P # 277) Example (P # 280) 2 (P # 282) 4 (P # 283)	**9.7** **Q.No.** (3(ii), 7, 10, 11(i), 12(i)) **9.8** **Q.No.** (2, 7, 11) **9** **MCQs: Q. No.** (1 - 28)	

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Abbottabad, Khyber Pakhtunkhwa

DEVELOPMENT / REVIEW TEAM

Urdu

- Muhammad Sajid, SST GHSS No.1 Mansehra
- Mr. Maqsood Jan, SST GHS Garhi Hameed Gul Charsadda
- Mr. Taj Wali, Subject Specialist DCTE Abbottabad

General Mathematics

- Mr. Ali Raza, SST GHS Chitta Batta Mansehra
- Mr. Masoom Shah, SST GHS Tarkha Nowshera
- Mr. Nadeem Sultan, Principal GHS Pawa Abbottabad

Physics

- Muhammad Khalid Khan, SST GHS Pawa
- Mr. Abid Musawir, SST GHS Nakot Mansehra
- Dr. Shafqat Hussain, Subject Specialist DCTE Abbottabad

English

- Mr. Mansoor Azam, SST GHSS Gari Habibullah Mansehra
- Muhammad Asif, SST GHS Malsa Abbottabad
- Mr. Inam Ullah Khan, Subject Specialist DCTE Abbottabad

Chemistry

- Mr. Majid Khan, SST GCMHS No. 3 Mardan
- Mr. Ghulam Murtaza, SST GMHS Havelian Abbottabad
- Dr. Gul Nazir Khan, Subject Specialist DCTE Abbottabad

Biology

- Mr. Bilal Ahmed, SST GHS No. 1 Abbottabad
- Mr. Hisamuddin SST, GHS Bumborate Chitral Lower
- Dr. Imtiaz Ali, Subject Specialist DCTE Abbottabad

Mathematics

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- Muhammad Rashid, SST GHSS Chamiali Abbottabad
- Mr. Abbas Khan, Subject Specialist DCTE Abbottabad

General Science

- Mr. Sajjad Ali, SST GHS Karnal Sher Khan Kalai Swabi
- Mr. Mubashir Naeem, SST GCMHS Murghuz Swabi
- Mr. Mukhtiar Muhammad, Subject Specialist DCTE Abbottabad

Computer Science

- Mr. Ahsan Nazir, SST(IT), GHS Sherwan Abbottabad
- Mr. Sajid Saleem Khan, SST(IT), GHS Shinkiari Mansehra
- Mst. Rafia Naz, Subject Specialist DCTE Abbottabad

Islamic Studies

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- Mr. Shah Islam, STT GHS Tarkha Nowshera
- Muhammad Athar, Subject Specialist DCTE Abbottabad

Pakistan Studies

- Mr. Amjad Khan, SST GHS Kakul Abbottabad
- Mr. Hamid Khan, Subject Specialist DCTE Abbottabad
- Mr. Babur Bashir Khan, Subject Specialist DCTE Abbottabad

Islamiyat

- Mr.Masood Ur Rehman, AT GHS Kelag Haripur
- Mr. Noor-ul-Amin SST GHS Chanar Buner
- Mst. Shabana Shaheen, Subject Specialist DCTE Abbottabad

SUPERVISION

- **Mr. Gohar Ali Khan**
  Director, Curriculum and Teacher Education
  Khyber Pakhtunkhwa, Abbottabad

- **Mr. Zulfiqar Khan**
  Additional Director, DCTE Khyber Pakhtunkhwa, Abbottabad

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Table of Specification Islamic Studies for GRADE-X

Unit No	Name of Unit	MCQs		CRQs		ERQs	
		No of Question	Marks	No of Question	Marks	No of Questions	Marks
1	مضامین قرآن	03	03	02	08	01	08
2	عبادات	02	02	02	08	1/2	04
3	سیرت رسول اکرم خاتم النبیین محمد رسول اللہ صلی اللہ علیہ وسلم	02	02	02	08	1/2	04
4	قرآنی آیات	02	02	01	04	1/2	04
5	حدیث اور سنت	02	02	02	08	1/2	04
6	اسلامی علوم اور مسلمانوں کی خدمات	02	02	01	04	1/2	04
7	اسلامی تہذیب وتمدن	01	01	01	04		
9	عربی زبان	01	01	01	04	1/2	04
Total		**15**	**15**	**12**	**48**	**04**	**32**

COGNILIVE LEVE	PERCENTAGE (%)
Knowledge (K)	50%
Understanding (U)	40%
Application (A)	10%
Total	**100%**

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نہم	عربی زبان	المرکب۔ الناقص والتام المرکب الناقص: المرکب الاضافی۔ التوصیفی المرکب التام: الجملۃ الاسمیۃ:(تعریف اور مثال) الجملۃ الفعلیۃ:(تعریف اور مثال) الفاعل والفعل والمفعول بہ	معلم طلباء سے ان قواعد کی عملی مشق کروائے۔

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ششم	اسلامی علوم اور مسلمانوں کی خدمات	سائنسی علوم، تعریف و اہمیت سائنسی علوم کے اسلامی ماخذ مشہور مسلمان سائنسدان عصر حاضر میں سائنس میں مسلمانوں کی پسماندگی کے اسباب	معلم طلباء سے مشہور مسلمان سائنسدانوں کی چند ایجادات کی فہرست بنوائے۔
ہفتم	اسلامی تہذیب و تمدن (تعارف و اہمیت)	تہذیب و تمدن کا مفہوم و معنٰی اسلامی تہذیب کی خصوصیات	معلم طلباء کے درمیان ''اسلامی تہذیب کس طرح دوسری تہذیبوں سے ممتاز ہے'' کے موضوع پر ایک مکالمہ کروائے۔

اسلامیات (اختیاری) جماعت دہم

باب	نام	عنوان	ہدایات برائے معلمین
اول	مضامین قرآن	۱۔ توحید، ۲۔ نبوت ورسالت، ۳۔ ملائکہ، ۴۔ آخرت / معاد	۱۔ معلم اللہ تعالیٰ کے صفاتی ناموں کی تشریح کے ذریعے طلبہ پر واضح کرے کہ وہ کس طرح اپنی ذات و صفات میں یکتا ہے؟ ۲۔ معلم طلباء کے سامنے نبی اور رسول کا فرق واضح کرتے ہوئے چند انبیاء کرام اور رسل علیہم السلام کے نام تحریر کروائے۔ ۳۔ معلم مشہور فرشتوں کے نام اور کام کا چارٹ طلبہ سے بنوائے۔ ۴۔ معلم کلاس میں عقیدہ آخرت کے انسانی زندگی پر اثرات پر طلبہ کے درمیان مکالمہ کروائے۔
دوم	عبادات	اسلامی عبادات کی خصوصیات۔ ۱۔ نماز، ۲۔ روزہ، ۳۔ حج	۱۔ معلم طلباء پر واضح کرے کہ عملی زندگی میں نماز چھوڑنے کے کیا نقصانات ہیں، نیز نماز کے فوائد اور اثرات بچوں سے اخذ کرائے۔ ۲۔ معلم طلباء کے درمیان حج کے انفرادی اور اجتماعی فوائد پر ایک مباحثہ کروائے۔
سوم	سیرت رسول اکرم خاتم النبیین محمد رسول اللہ ﷺ	رسول اکرم خاتم النبیین محمد رسول اللہ ﷺ اور ان کی تعلیمات کی حیثیت اور مقام۔ ختم نبوت اور اس کے خصائص۔ اسوہ حسنہ۔	معلم طلباء کے مابین ختم نبوت کے موضوع پر ایک مکالے کا اہتمام کروائے۔ معلم طلباء سے سیرت طیبہ کی کسی کتاب کا مطالعہ کروائے۔
چہارم	قرآنی آیات (ترجمہ و تشریح)	تمام قرآنی آیات (ترجمہ و تشریح)	معلم طلباء سے تمام قرآنی آیات درست تلفظ کے ساتھ پڑھوا کر اُن کا ترجمہ اور تشریح کرے۔
پنجم	حدیث اور سنت	۱۔ جمع و تدوین حدیث	معلم طلباء کے سامنے صحیح تلفظ کے ساتھ پہلے حدیث کی عبارت پڑھے اور پھر طلباء سے پڑھوائے۔

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Assessment weightage of General Science Grade –X According to (Curriculum, 2006) only for Session(2020-2021)

TOS (TABLE OF SPECIFICATION)

Overall assessment Percentage of (Cognitive Levels)

Cognitive Level	Percentage
Knowledge(K)	10
Understanding(U)	78
Application(A)	12
Total	100

Cognitive abilities assessment weightage in Chemistry Grade-IX Theory Paper for Session (2020-2021)

Questions	Knowledge (K)			Understanding (U)			Application (A)		
	Questions	Marks	%	Questions	Marks	%	Questions	Marks	%
MCQs	2	2	17	9	9	75	1	1	8
Short Questions	1	4	10	9	36	80	1	4	10
Long Questions	1	3	11	3+3	9+12	74	1	4	15

Instructions for teachers/Paper setters:

Teachers are requested to follow the above sample of specification while designing the test/paper

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TABLE OF SPECIFICATION FOR GENERAL SCIENCE PAPER GRADE-X

S#	Unit name	Assessment weightage		MCQs (total-15)		Short questions (Section-B) (08/12 questions) Marks-36		Long Questions (Section-C) Questions 3/4 Marks-24	
		Curriculum 2006	Adjust:	Question	Marks	Question	Marks	Question	Marks
1	Electricity In Everyday Life	8	16	3	3	2	8	½	4
2	Chemical Reaction And Practical Application	8	16	2	2	2	8	½	4
3	Biotechnology	10	20	2	2	2	8	½	4
4	Water Resources	6	12	2	2	2	8	½	4
5	Environmental Problems And Management	9	18	3	3	2	8	1	8
6	Science, Technology And Development	9	18	3	3	2	8	1	8
7	**TOTAL**	**75**	**100**	**15**	**15**	**12**	**48**	**4**	**32**

		• Functions of SPARCO • Contribution of SPARCO	students and ask each pair to discuss functions of SPARCO. **Homework:** Ask students to write a short note on contribution of SPARCO in country development.
		Exercise	➢ Solve and answer all questions according to selected topics.

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			Homework: Write ten methods of "Water pollution reduction". Write a detailed note on "Use of TV, mobile, and computer in a healthy way".
		Exercise	➢ Sort out and solve questions from selected topics.
11	**Science, Technology and Development**	**Important technological developments** ➢ Lasers ➢ Applications of lasers	➢ Display laser and ordinary torch in the class then put some questions to students relating daily life. ➢ Finding answers, initiate your discussion on the topic and take key points on writing board . **Homework:** Write a detail note on "Laser and its applications"
		Modern methods of medical diagnostics and treatment • X-rays • Functions of x-rayes • Uses of x-rayes • Ultra Sound • Application of Ultrasonic • CT SCAN (Computer Tomography) • MRI	➢ Draw diagram of X – Ray Apparatus and deliver a mini lecture on the topic and sub topics. **Homework:** Write a detail note on X – Rays and application of Ultrasonic
		Information Technology (IT) • Computer • Basic elements of a Computer • Television • Mobile or Cell Phone	➢ Use different charts to explain various parts of computer, television and mobile then ask questions to strengthen the concept. **Homework:** Ask students to write a note on information technology as home assignment.
		Space Exploration • Pakistan Space Programme	➢ Deliver a mini lecture on Pakistan Space Programme then write function of SPARCO in bullet form on writing board. Make pairs of

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			➢ Identify different resources of water with the help of flash cards/pictures/charts. **Homework:** Write a short note on "Sustainable development of water"
		Potable water system	➢ Use physical model of water treatment plant to explain the topic. ➢ Write components of potable water system in form of bullets on writing board. **Homework:** Draw a detailed labeled diagram of "water treatment plant"
		Exercise	➢ Sort out all questions according to the selected topics and solve.
10	**Environmental Problems and Management**	**Introduction** ➢ Desertification ➢ Climate change ➢ Solid & Hazardous wastes	➢ Give a brief introduction about "Environment" ➢ Use flash cards and explain with examples from daily life. **Homework:** Write a note on "Reduction of Pollution".
		Natural disasters ➢ Earthquakes ➢ Storms ➢ El Nino and La Nina ➢ Impacts of El Nino & La Nina	➢ 1st define Natural Disasters and tell about negative effects of Anthropogenic activities. ➢ Use animations (if possible). **Homework:** Write a note on "ways to reduce natural disaster's damages".
		Water Pollution ➢ Sources of chemical water pollution ➢ Health effects ➢ Methods to reduce water pollution ➢ Harmful effects of excessive use of TV. ➢ Harmful effects of Excessive use of Mobile. ➢ Harmful effects of Excessive use of computer.	➢ Define pollution and pollutants. ➢ Describe "Types of pollution" briefly. ➢ Write "Sources of pollution" on writing board in the form of bullets. ➢ Initiate discussion with "Bad effects of modern technology". ➢ Use animation (if possible).

		Genetic Engineering & Biotechnology • Cloning • Transgenic animals/plants • Biotechnology and genetic engineering in the field of food processing	➢ Initiate discussion on "Cloning" with some provoking questions. ➢ Use charts or show animations (if possible) **Homework:** Make a list of GMOs Make a labeled chart of "Cloning"
		Exercise	➢ Sort out and solve all questions according to the selected topics.
09	**Water Resources**	**Introduction** **Forms of water present on Earth** ➢ Oceans and Seas ➢ Lakes ➢ Rivers ➢ Springs ➢ Glaciers ➢ Underground Water	➢ Ask the students about different forms of water and proceed the discussion by writing each FORM on the writing board. ➢ Arrange a quiz among students on "Form of Water" ➢ Use flash cards for explaining different terms like "lakes, rivers, seas, glaciers" etc or use Globe. **Homework:** Write a detail note on following "Lake, springs, fresh water"
		Fresh water resources of Pakistan	➢ Initiate discussion on "Fresh water" by asking some provoking questions. ➢ Use map for "fresh water resources" locations. **Homework:** Prepare 10 bullets on "fresh water resources"
		Methods for reclamation and conservation of water	➢ Start methods explanation by asking a question on "importance of water" ➢ Arrange a quiz among students on "conservation methods of water" **Homework:** Prepare a presentation on "water importance"
		Sustainable development of water resources of Pakistan	➢ Initiate discussion by asking about "sustainable development"

			➢ Identify different resources of water with the help of flash cards/pictures/charts. **Homework:** Write a short note on "Sustainable development of water"
		Potable water system	➢ Use physical model of water treatment plant to explain the topic. ➢ Write components of potable water system in form of bullets on writing board. **Homework:** Draw a detailed labeled diagram of "water treatment plant"
		Exercise	➢ Sort out all questions according to the selected topics and solve.
10	**Environmental Problems and Management**	**Introduction** ➢ Desertification ➢ Climate change ➢ Solid & Hazardous wastes	➢ Give a brief introduction about "Environment" ➢ Use flash cards and explain with examples from daily life. **Homework:** Write a note on "Reduction of Pollution".
		Natural disasters ➢ Earthquakes ➢ Storms ➢ El Nino and La Nina ➢ Impacts of El Nino & La Nina	➢ 1st define Natural Disasters and tell about negative effects of Anthropogenic activities. ➢ Use animations (if possible). **Homework:** Write a note on "ways to reduce natural disaster's damages".
		Water Pollution ➢ Sources of chemical water pollution ➢ Health effects ➢ Methods to reduce water pollution ➢ Harmful effects of excessive use of TV. ➢ Harmful effects of Excessive use of Mobile. ➢ Harmful effects of Excessive use of computer.	➢ Define pollution and pollutants. ➢ Describe "Types of pollution" briefly. ➢ Write "Sources of pollution" on writing board in the form of bullets. ➢ Initiate discussion with "Bad effects of modern technology". ➢ Use animation (if possible).

			Homework: Write ten methods of "Water pollution reduction". Write a detailed note on "Use of TV, mobile, and computer in a healthy way".
		Exercise	➢ Sort out and solve questions from selected topics.
11	**Science, Technology and Development**	**Important technological developments** ➢ Lasers ➢ Applications of lasers	➢ Display laser and ordinary torch in the class then put some questions to students relating daily life. ➢ Finding answers, initiate your discussion on the topic and take key points on writing board . **Homework:** Write a detail note on "Laser and its applications"
		Modern methods of medical diagnostics and treatment • X-rays • Functions of x-rayes • Uses of x-rayes • Ultra Sound • Application of Ultrasonic • CT SCAN (Computer Tomography) • MRI	➢ Draw diagram of X – Ray Apparatus and deliver a mini lecture on the topic and sub topics. **Homework:** Write a detail note on X – Rays and application of Ultrasonic
		Information Technology (IT) • Computer • Basic elements of a Computer • Television • Mobile or Cell Phone	➢ Use different charts to explain various parts of computer, television and mobile then ask questions to strengthen the concept. **Homework:** Ask students to write a note on information technology as home assignment.
		Space Exploration • Pakistan Space Programme	➢ Deliver a mini lecture on Pakistan Space Programme then write function of SPARCO in bullet form on writing board. Make pairs of

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		• Functions of SPARCO • Contribution of SPARCO	students and ask each pair to discuss functions of SPARCO. **Homework:** Ask students to write a short note on contribution of SPARCO in country development.
		Exercise	➢ Solve and answer all questions according to selected topics.

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TABLE OF SPECIFICATION FOR GENERAL SCIENCE PAPER GRADE-X

S#	Unit name	Assessment weightage		MCQs (total-15)		Short questions (Section-B) (08/12 questions) Marks-36		Long Questions (Section-C) Questions 3/4 Marks-24	
		Curriculum 2006	Adjust:	Question	Marks	Question	Marks	Question	Marks
1	Electricity In Everyday Life	8	16	3	3	2	8	½	4
2	Chemical Reaction And Practical Application	8	16	2	2	2	8	½	4
3	Biotechnology	10	20	2	2	2	8	½	4
4	Water Resources	6	12	2	2	2	8	½	4
5	Environmental Problems And Management	9	18	3	3	2	8	1	8
6	Science, Technology And Development	9	18	3	3	2	8	1	8
7	**TOTAL**	**75**	**100**	**15**	**15**	**12**	**48**	**4**	**32**

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Assessment weightage of General Science Grade –X According to (Curriculum, 2006) only for Session(2020-2021)

TOS (TABLE OF SPECIFICATION)

Overall assessment Percentage of (Cognitive Levels)

Cognitive Level	Percentage
Knowledge(K)	10
Understanding(U)	78
Application(A)	12
Total	100

Cognitive abilities assessment weightage in Chemistry Grade-IX Theory Paper for Session (2020-2021)

Questions	Knowledge (K)			Understanding (U)			Application (A)		
	Questions	Marks	%	Questions	Marks	%	Questions	Marks	%
MCQs	2	2	17	9	9	75	1	1	8
Short Questions	1	4	10	9	36	80	1	4	10
Long Questions	1	3	11	3+3	9+12	74	1	4	15

Instructions for teachers/Paper setters:

Teachers are requested to follow the above sample of specification while designing the test/paper

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اسلامیات (اختیاری) جماعت دہم

باب	نام	عنوان	ہدایات برائے معلمین
اول	مضامین قرآن	۱۔ توحید، ۲۔ نبوت ورسالت، ۳۔ ملائکہ، ۴۔ آخرت / معاد	۱۔ معلم اللہ تعالیٰ کے صفاتی ناموں کی تشریح کے ذریعے طلبہ پر واضح کرے کہ وہ کس طرح اپنی ذات و صفات میں یکتا ہے؟ ۲۔ معلم طلباء کے سامنے نبی اور رسول کا فرق واضح کرتے ہوئے چند انبیاء کرام اور رسل علیہم السلام کے نام تحریر کروائے۔ ۳۔ معلم مشہور فرشتوں کے نام اور کام کا چارٹ طلبہ سے بنوائے۔ ۴۔ معلم کلاس میں عقیدہ آخرت کے انسانی زندگی پر اثرات پر طلبہ کے درمیان مکالمہ کروائے۔
دوم	عبادات	اسلامی عبادات کی خصوصیات۔ ۱۔ نماز، ۲۔ روزہ، ۳۔ حج	۱۔ معلم طلباء پر واضح کرے کہ عملی زندگی میں نماز چھوڑنے کے کیا نقصانات ہیں، نیز نماز کے فوائد اور اثرات بچوں سے اخذ کرائے۔ ۲۔ معلم طلباء کے درمیان حج کے انفرادی اور اجتماعی فوائد پر ایک مباحثہ کروائے۔
سوم	سیرت رسول اکرم خاتم النبیین محمد رسول اللہ ﷺ	رسول اکرم خاتم النبیین محمد رسول اللہ ﷺ اور ان کی تعلیمات کی حیثیت اور مقام۔ ختم نبوت اور اس کے خصائص۔ اسوہ حسنہ۔	معلم طلباء کے مابین ختم نبوت کے موضوع پر ایک مکالے کا اہتمام کروائے۔ معلم طلباء سے سیرت طیبہ کی کسی کتاب کا مطالعہ کروائے۔
چہارم	قرآنی آیات (ترجمہ و تشریح)	تمام قرآنی آیات (ترجمہ و تشریح)	معلم طلباء سے تمام قرآنی آیات درست تلفظ کے ساتھ پڑھوا کر اُن کا ترجمہ اور تشریح کرے۔
پنجم	حدیث اور سنت	۱۔ جمع و تدوین حدیث	معلم طلباء کے سامنے صحیح تلفظ کے ساتھ پہلے حدیث کی عبارت پڑھے اور پھر طلباء سے پڑھوائے۔

		۲۔ مشہور کتب حدیث اور اُن کے مصنفین کا تعارف ۳۔ اصطلاحات حدیث ۴۔ منتخب احادیث (ترجمہ و تشریح) حدیث نمبر ۱۔ حدیث نمبر ۲ حدیث نمبر ۳۔ حدیث نمبر ۶ حدیث نمبر ۸۔ حدیث نمبر ۹ حدیث نمبر ۱۰۔ حدیث نمبر ۱۱ حدیث نمبر ۱۴۔ حدیث نمبر ۱۵ حدیث نمبر ۱۷۔ حدیث نمبر ۱۹ حدیث نمبر ۲۰۔ حدیث نمبر ۲۲	معلم چند احادیث طلباء کو زبانی یاد کروائے۔
ششم	اسلامی علوم اور مسلمانوں کی خدمات	سائنسی علوم، تعریف و اہمیت سائنسی علوم کے اسلامی ماخذ مشہور مسلمان سائنسدان عصر حاضر میں سائنس میں مسلمانوں کی پسماندگی کے اسباب	معلم طلباء سے مشہور مسلمان سائنسدانوں کی چند ایجادات کی فہرست بنوائے۔
ہفتم	اسلامی تہذیب و تمدن (تعارف و اہمیت)	تہذیب و تمدن کا مفہوم و معنٰی اسلامی تہذیب کی خصوصیات	معلم طلباء کے درمیان ''اسلامی تہذیب کس طرح دوسری تہذیبوں سے ممتاز ہے'' کے موضوع پر ایک مکالمہ کروائے۔

نہم	عربی زبان	المرکب۔ الناقص والتام المرکب الناقص: المرکب الاضافی۔ التوصیفی المرکب التام: الجملۃ الاسمیۃ:(تعریف اور مثال) الجملۃ الفعلیۃ:(تعریف اور مثال) الفاعل والفعل والمفعول بہ	معلم طلباء سے ان قواعد کی عملی مشق کروائے۔

نوٹ:

۱۔ اس درسی کتاب میں جہاں بھی نبی کریم ﷺ کا نام مبارک آیا ہے۔ اُس کو رسول اکرم خاتم النبیین محمد رسول اللہ ﷺ لکھا اور پڑھا جائے۔

۲۔ یہ سلیبس صرف تعلیمی سال 21-2020 کے لئے ہے۔ لہٰذا رواں تعلیمی سال اس سلیبس کو مدنظر رکھتے ہوئے اسلامیات اختیاری کی درسی کتاب پڑھائی جائے۔

۳۔ اس سلیبس میں نصاب کا جتنا حصہ دیا گیا ہے پرچہ اُسی میں سے بنایا جائے گا۔

۴۔ اس سلیبس میں متعین شدہ مواد سے متعلقہ مشقی سوالات کے جوابات لکھوائے جائیں۔

۵۔ قرآن مجید کی آیات اور احادیث مبارکہ پڑھاتے وقت اساتذہ کرام طلباء کے سامنے پہلے خود صحیح تلفظ سے پڑھیں اور پھر طلباء سے پڑھوائیں۔

۶۔ اس سلیبس میں مختص کردہ نصاب کو بروقت مکمل کیا جائے۔

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Table of Specification Islamic Studies for GRADE-X

Unit No	Name of Unit	MCQs		CRQs		ERQs	
		No of Question	Marks	No of Question	Marks	No of Questions	Marks
1	مضامین قرآن	03	03	02	08	01	08
2	عبادات	02	02	02	08	1/2	04
3	سیرت رسول اکرم خاتم النبیین محمد رسول اللہ صلی اللہ علیہ وسلم	02	02	02	08	1/2	04
4	قرآنی آیات	02	02	01	04	1/2	04
5	حدیث اور سنت	02	02	02	08	1/2	04
6	اسلامی علوم اور مسلمانوں کی خدمات	02	02	01	04	1/2	04
7	اسلامی تہذیب وتمدن	01	01	01	04		
9	عربی زبان	01	01	01	04	1/2	04
Total		**15**	**15**	**12**	**48**	**04**	**32**

COGNILIVE LEVE	PERCENTAGE (%)
Knowledge (K)	50%
Understanding (U)	40%
Application (A)	10%
Total	**100%**

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DEVELOPMENT / REVIEW TEAM

Urdu

- Muhammad Sajid, SST GHSS No.1 Mansehra
- Mr. Maqsood Jan, SST GHS Garhi Hameed Gul Charsadda
- Mr. Taj Wali, Subject Specialist DCTE Abbottabad

General Mathematics

- Mr. Ali Raza, SST GHS Chitta Batta Mansehra
- Mr. Masoom Shah, SST GHS Tarkha Nowshera
- Mr. Nadeem Sultan, Principal GHS Pawa Abbottabad

Physics

- Muhammad Khalid Khan, SST GHS Pawa
- Mr. Abid Musawir, SST GHS Nakot Mansehra
- Dr. Shafqat Hussain, Subject Specialist DCTE Abbottabad

English

- Mr. Mansoor Azam, SST GHSS Gari Habibullah Mansehra
- Muhammad Asif, SST GHS Malsa Abbottabad
- Mr. Inam Ullah Khan, Subject Specialist DCTE Abbottabad

Chemistry

- Mr. Majid Khan, SST GCMHS No. 3 Mardan
- Mr. Ghulam Murtaza, SST GMHS Havelian Abbottabad
- Dr. Gul Nazir Khan, Subject Specialist DCTE Abbottabad

Biology

- Mr. Bilal Ahmed, SST GHS No. 1 Abbottabad
- Mr. Hisamuddin SST, GHS Bumborate Chitral Lower
- Dr. Imtiaz Ali, Subject Specialist DCTE Abbottabad

Mathematics

- Mr. Saqib Sattar, SST GHSS Srai Saleh Haripur
- Muhammad Rashid, SST GHSS Chamiali Abbottabad
- Mr. Abbas Khan, Subject Specialist DCTE Abbottabad

General Science

- Mr. Sajjad Ali, SST GHS Karnal Sher Khan Kalai Swabi
- Mr. Mubashir Naeem, SST GCMHS Murghuz Swabi
- Mr. Mukhtiar Muhammad, Subject Specialist DCTE Abbottabad

Computer Science

- Mr. Ahsan Nazir, SST(IT), GHS Sherwan Abbottabad
- Mr. Sajid Saleem Khan, SST(IT), GHS Shinkiari Mansehra
- Mst. Rafia Naz, Subject Specialist DCTE Abbottabad

Islamic Studies

- Mr. Qayash Bahadar, Qari GCMS Murghuz Swabi
- Mr. Shah Islam, STT GHS Tarkha Nowshera
- Muhammad Athar, Subject Specialist DCTE Abbottabad

Pakistan Studies

- Mr. Amjad Khan, SST GHS Kakul Abbottabad
- Mr. Hamid Khan, Subject Specialist DCTE Abbottabad
- Mr. Babur Bashir Khan, Subject Specialist DCTE Abbottabad

Islamiyat

- Mr.Masood Ur Rehman, AT GHS Kelag Haripur
- Mr. Noor-ul-Amin SST GHS Chanar Buner
- Mst. Shabana Shaheen, Subject Specialist DCTE Abbottabad

SUPERVISION

- **Mr. Gohar Ali Khan**
  Director, Curriculum and Teacher Education
  Khyber Pakhtunkhwa, Abbottabad

- **Mr. Zulfiqar Khan**
  Additional Director, DCTE Khyber Pakhtunkhwa, Abbottabad

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DIRECTORATE OF CURRICULAM AND TEACHER EDUCATION (DCTE)
Abbottabad, Khyber Pakhtunkhwa