



Board of Intermediate & Secondary Education,
86-Mozang Road, Lahore

**Academic
Session
2024-2026**

.....

Rules of Secondary School Examinations & Scheme of Studies (9th & 10th)

.....



TABLE OF CONTENTS

	Page No
Rules of Secondary School Examination and Scheme of Studies 9th & 10th (<i>Academic Session 2012-2014 & onward</i>)	iv-xiv
COMPONENT-I	
1. Urdu /	1
Urdu (Quaid-O-Insha) اُردو قواعد و انشا	2
Geography of Pakistan (<i>For Foreign Students only in lieu of Urdu</i>)	3
2. English /	4
English Grammer & Composition	5-6
3. Islamiyat /	7-8
Ikhlaiyat (<i>For Non-Muslim in lieu of Islamiyat</i>)	9
4. Pakistan Studies	10-16
5. Translation of the Holy Quran	17
COMPONENT II - (SCIENCE GROUP)	
1. Physics	18-22
2. Chemistry	23-27
3. Biology	28-33
OR Computer Science & Entrepreneurship	34-36
4. Mathematics	37-40
(HUMANITIES / GENERAL GROUP)	
1. General Science	41-43
MATRIC-TECH (FASHION DESIGNING) GROUP	
1. General Science (Tech)	109
2. Computer Science & Entrepreneurship (Tech)	115-116
3. Communication Skills & Personal Grooming	107-108
4. Fashion Designing	99-100
MATRIC-TECH (AGRICULTURE SCIENCES) GROUP	
1. Physics (Tech)	112-113
2. Chemistry (Tech)	110-111
3. Biology (Tech)	114
4. Agriculture Sciences	101-102
MATRIC-TECH (HEALTH SCIENCES) GROUP	
1. Agriculture Sciences	101-102
MATRIC-TECH (COMPUTER SCIENCE) GROUP	
1. Information & Communication Technology (ICT)	105-106
LIST OF SUBJECTS	
1. Civics	44-45
2. Education	46-47
3. Economics	48-49
4. Physiology & Hygiene	50-52
5. Geography	53
6. Food & Nutrition (غذا اور غذائیت)	54

7.	Military Science	55-60
8.	History of Pakistan (تاریخ پاکستان)	61
9.	English Literature	62
10.	Urdu Literature (اُردو ادبیات)	63
11.	Art and Model Drawing (آرٹ اینڈ ماڈل ڈرائنگ)	64-65
12.	Persian	66
13.	Arabic	67
14.	Punjabi	68

نوٹ:- جنرل گروپ اختیار کرنے والے امیدوار '۲' لسٹ میں سے دو مضامین یا ایک مضمون '۲' لسٹ میں اور ایک مضمون ٹیکنیکل مضامین کی لسٹ سے جن کا نصاب دستیاب ہو، لے سکتے ہیں۔ نیز لسانیات مضامین میں سے بیک وقت دو مضامین اختیار نہیں کیے جاسکتے۔

15.	Advanced Islamic Studies	69
16.	Health & Physical Education (صحت و جسمانی تعلیم)	72
17.	Commercial Geography	73
18.	Clothing and Textile (لباس اور پاپچہ بانی)	74
19.	Islamic History / Muslim History	75-76
20.	Elements of Home Economics (مبادیات ہوم اکنامکس)	77
21.	Saraiki	◆
22.	Environmental studies	◆
23.	History of Civilization	◆
24.	Agriculture	◆
25.	Secretarial Practice	◆
26.	Business Studies	◆

◆ Syllabi not yet available

DARS-E-NIZAMI GROUP

1.	Seerat-e-Taiba	70-71
2.	Urdu	1
3.	English	4
4.	Seerat ul Rasool (خاتم النبیین صلی اللہ علیہ وسلم)	79
5.	Translation of the Holy Quran	17
6.	Pakistan Studies	10-16
7.	General Science	41-43

ELECTIVE SUBJECTS (Dars-e-Nizami Group)

1.	Al-Quran	80
2.	Al-Hadith (Darsi Nizami Group introduced in the existing scheme of studies for Secondary School Certificate under General Group)	81-82

LIST OF TECHNICAL SUBJECTS

1.	Geometrical & Technical Drawing	83
2.	Electrical Wiring	84-85
3.	Wood Work (Furniture Making)	86-87
4.	Repair & Maintenance of Domestic Refrigerator & Air Conditioner	88-89

5.	Computer Hardware	90-91
6.	Poultry Farming	92-93
7.	Fish Farming	94-95
8.	Dress Making and Fashion Designing	96-97
9.	Beautician	98



قواعد و ضوابط

برائے

سیکنڈری سکول سرٹیفکیٹ پارٹ سسٹم امتحان

1- سیکرٹری تعلیمات/کنٹرولنگ اتھارٹی بورڈز (حکومت پنجاب) کی طرف سے جاری کردہ لیٹر نمبر S.O(Boards) 12-3/2014 مورخہ 18.09.2015 اور پنجاب بورڈز کمیٹی آف چیئرمین کے اجلاس منعقدہ 24 دسمبر 2014 کی شق نمبر 13 کے تحت سیکنڈری سکول و ہائر سیکنڈری سکول کی سطح پر پریکٹیکل کی گریڈنگ کو ختم کر کے دوبارہ پریکٹیکل کے نمبر بحال کر دیے گئے ہیں (جس کی تفصیل بورڈ کی جانب سے کیے گئے نوٹیفکیشن نمبر 2/2015 مورخہ 28.09.2015) پر موجود ہے۔ نیز حکومت کی پنجاب چیف منسٹر زما نیٹرنگ فورس سکول ایجوکیشن کی طرف سے سیکنڈری سکول کی سطح پر ڈیٹنگی سے متعلق مختصر سوال نہم جماعت میں بیالوجی اور جنرل سائنس جبکہ جماعت دہم میں دہشت گردی سے متعلق مختصر سوال مطالعہ پاکستان کے پرچہ میں دیئے جائیں گے۔ اسی طرح انٹر میڈیٹ کی سطح پر دہشت گردی سے متعلق مختصر سوال گیارہویں جماعت میں اسلامیات لازمی جبکہ بارہویں جماعت کے لیے ڈیٹنگی سے متعلق سوال مطالعہ پاکستان میں دیئے جائیں گے۔ اس سکیم کا اطلاق اکیڈمک سیشن-2015 سے 17 سے ہو گا۔ اس سکیم کے تحت نہم جماعت سالانہ امتحان 2016ء و ما بعد لیا جائے گا۔ نہم جماعت اور دہم جماعت کے امتحانات کے لیے مضامین/پرچہ جات اور نمبروں کی تقسیم درج ذیل ہو گی۔

BOARD OF INTERMEDIATE & SECONDARY EDUCATION, LAHORE NOTIFICATION NO.02/2015

It is hereby notified for information of all concerned that Punjab Boards Committee of Chairmen in its meeting held on 24.12.2014 vide Item No. 13 has approved and Revived Scheme of Studies at Secondary School level from academic session 2015-17 & onward in compliance with the orders of the Controlling Authority vide letter No. S.O(Boards) 12-3/2014 dated 18-09-2015:

SCHEME OF STUDIES FOR SECONDARY SCHOOL CERTIFICATE EXAMINATIONS UNDER PART SYSTEM FOR ACADEMIC SESSION 2015-17 & ONWARD

Punjab Boards Committee of Chairmen offer qualifications for both English and Urdu medium schools. The revived SSC Scheme of Studies issued by the Curriculum Wing will be implemented from Academic Session 2015-17 and onward. The practical in each subject will be conducted separately after completion of class 10th & 12th Examinations. The marks of practical would be counted with theory marks obtained by the candidates. (with reference of the Board Notification No. 2/2015 dated 28-09-2015) Accordingly, each SSC subject will be taught across both the Classes IX & X. The Science Group and Humanities Group subjects are offered at SSC level. The marks allocated to the subjects in the Revived Scheme of Studies are as follows:

SCIENCE GROUP

Sr.#	Subject	Part-I	Part-II	Practical
1.	Urdu (In lieu of Urdu, Geography of Pakistan for Foreign Students Only).	75	75	
2.	English	75	75	
3.	Islamiyat Compulsory OR Religious Education (For Non-Muslims)	100		
4.	Translation of the Holy Quran OR Ethics (For Non-Muslims)	50	50	
5.	Pakistan Studies		100	
6.	Mathematics	75	75	
7.	Physics	60	60	30
8.	Chemistry	60	60	30
9.	Biology OR Computer Science	60 50	60 50	30 50
Total Marks:		1200		

- * Foreign students may opt GEOGRAPHY OF PAKISTAN in lieu of Urdu Compulsory subject to the approval of the Board.
- * Non-Muslim candidates can opt Ethics in lieu of Islamiyat Compulsory.

HUMANITIES GROUP

Sr.#	Subject	Part-I	Part-II	Practical
1.	Urdu (In lieu of Urdu, Geography of Pakistan for Foreign Students Only).	75	75	
2.	English	75	75	
3.	Islamiyat Compulsory OR Religious Education (For Non-Muslims)	100		
4.	Translation of the Holy Quran OR Ethics (For Non-Muslims)	50	50	
5.	Pakistan Studies		100	
6.	Mathematics	75	75	
7.	General Science	75	75	
8.	Two Elective Subjects (from the list of Elective Subjects)	75+75	75+75	
	OR (in case of Elective Subjects with Practical)	60	60	30
	(in case of Technical Subjects) Two Technical Subjects	40+40	40+40	140
	OR One Elective Subject & One Technical Subject	75 40	75 40	70
Total Marks:		1200		

Note: Marks distribution in elective and technical subjects is according to the marks given in the list of elective and technical subjects.

MATRIC-TECH (FASHION DESIGN) GROUP

Sr.#	Subject	Part-I	Part-II	Practical
1.	Urdu (In lieu of Urdu, Geography of Pakistan for Foreign Students Only).	75	75	
2.	English	75	75	
3.	Islamiyat Compulsory OR Religious Education (For Non-Muslims)	100		
4.	Translation of the Holy Quran OR Ethics (For Non-Muslims)	50	50	
5.	Pakistan Studies		100	
6.	Mathematics	75	75	
7.	General Science (Tech)	50	50	
8.	Computer Science & Entrepreneurship (Tech)	40	40	20
9.	Communication Skills & Personal Grooming	40	40	20
10.	Fashion Designing	40	40	35+35
Total Marks:		1200		

MATRIC-TECH (AGRICULTURE SCIENCES) GROUP

Sr.#	Subject	Part-I	Part-II	Practical
1.	Urdu (In lieu of Urdu, Geography of Pakistan for Foreign Students Only).	75	75	
2.	English	75	75	
3.	Islamiyat Compulsory OR Religious Education (For Non-Muslims)	100		
4.	Translation of the Holy Quran OR Ethics (For Non-Muslims)	50	50	
5.	Pakistan Studies		100	
6.	Mathematics	75	75	
7.	Physics (Tech)	40	40	20
8.	Chemistry (Tech)	40	40	20
9.	Biology (Tech)	40	40	20
10.	Agriculture Sciences	40	40	35+35
Total Marks:		1200		

MATRIC-TECH (HEALTH SCIENCES) GROUP

Sr.#	Subject	Part-I	Part-II	Practical
1.	Urdu (In lieu of Urdu, Geography of Pakistan for Foreign Students Only).	75	75	
2.	English	75	75	
3.	Islamiyat Compulsory OR Religious Education (For Non-Muslims)	100		
4.	Translation of the Holy Quran OR Ethics (For Non-Muslims)	50	50	
5.	Pakistan Studies		100	
6.	Mathematics	75	75	
7.	Physics (Tech)	40	40	20
8.	Cemistry (Tech)	40	40	20
9.	Biology (Tech)	40	40	20
10.	Health Sciences	40	40	35+35
Total Marks:		1200		

MATRIC-TECH (COMPUTER SCIENCES) GROUP

Sr.#	Subject	Part-I	Part-II	Practical
1.	Urdu (In lieu of Urdu, Geography of Pakistan for Foreign Students Only).	75	75	
2.	English	75	75	
3.	Islamiyat Compulsory OR Religious Education (For Non-Muslims)	100		
4.	Translation of the Holy Quran OR Ethics (For Non-Muslims)	50	50	
5.	Pakistan Studies		100	
6.	Mathematics	75	75	
7.	Physics (Tech)	40	40	20
8.	Cemistry (Tech)	40	40	20
9.	Computer Science & Entrepreneurship (Tech)	40	40	20
10.	Information & Communication Technology (ICT)	40	40	35+35
Total Marks:		1200		

**SCHEME OF STUDIES –SSC GRADES IX & X
(HUMANITIES GROUP) ELECTIVE SUBJECTS**

Sr.#	Subject	Part-I	Part-II	Practical
1.	Civics	75	75	
2.	Education	75	75	
3.	Economics	75	75	
4.	Elements of Home Economics	75	75	
5.	Physiology & Hygiene	75	75	
6.	Geography	75	75	
7.	Food & Nutrition	60	60	30
8.	Clothing & Textile	60	60	30
9.	Military Science	75	75	
10.	History of Pakistan	75	75	
11.	English Literature	75	75	
12.	Urdu Literature	75	75	
13.	Art & Model Drawing	40	40	70
14.	Persian / Arabic / Punjabi / Saraiki	75	75	
15.	Advanced Islamic Studies	75	75	
16.	Health & Physical Education	60	60	30
17.	Computer Science & Entrepreneurship	50	50	50
18.	◆ Environmental Studies	75	75	
19.	◆ Muslim History	75	75	
20.	◆ History of Civilization	75	75	
21.	◆ Agriculture	75	75	
22.	◆ Secretarial Practice	75	75	
23.	◆ Business Studies	75	75	
24.	Commercial Geography	75	75	

- ◆ Subjects will be offered on the availability of the syllabus subject to the prior approval of the Board.

- Note:** (i) The recognized / affiliated institutions shall offer only those subjects to the candidates for which they are affiliated.
- (ii) Only one language can be taken from the approved list of languages, languages given at Sr.No.14.
- (iii) Not more than two Histories can be taken from the approved list of elective subjects.
- (iv) Short Question of 02-Numbers on “Dengue” will be included in the Question Papers of Biology and General Science for 9th Class students.
- (v) Short Question of 02-Numbers on “Terrorism” will be included in the Question Paper of Pakistan Studies for 9th Class students.

TECHNICAL SUBJECTS

Sr.#	Subject	Part-I	Part-II	Practical
1.	Geometrical & Technical Drawing	75	75	--
2.	Electrical Wiring	40	40	70
3.	Wood Work (Furniture Making)	40	40	70
4.	Repair & Maintenance of Domestic Refrigerator & Air Conditioner	40	40	70
5.	Computer Hardware	40	40	70
6.	Poultry Farming	40	40	70
7.	Fish Farming	40	40	70
8.	Dress Making and Fashion Designing	40	40	70
9.	Beautician	40	40	70

DARS-E-NIZAMI GROUP

(Can be taken for examination with the written permission from Chairman of the Board)

Sr.#	Subject	Part-I	Part-II
1.	Urdu (In lieu Urdu, Geography of Pakistan for Foreign Students Only).	75	75
2.	English	75	75
3.	Islamiyat Compulsory /Seerat-un-Nabi (خَاتَمُ النَّبِيِّ صَلَّى اللَّهُ عَلَيْهِ وَسَلَّمَ)	100	
4.	Translation of the Holy Quran	50	50
5.	Pakistan Studies		100
6.	Mathematics	75	75
7.	General Science	75	75
8.	Al-Quran	75	75
9.	Al-Hadith (Part-I) Al-Fiqah (Part-II)	75	75
		600	600
<i>Total Marks:</i>		1200	

SCHEME OF STUDIES FOR DEAF AND DUMB

Sr.#	Subject	Part-I	Part-II	Practical	Total
1.	Urdu	75	75	---	150
2.	English	75	75	---	150
3.	Pakistan Studies		100	---	100
4.	Islamiyat Compulsory OR Religious Education (For Non-Muslims)	100		---	100
5.	Translation of the Holy Quran OR Ethics (For Non-Muslims)	50	50	---	100
6.	Mathematics	75	75	---	150
7.	Elective Subject (One)	30	30	90	150
8.	Elective Subject (Two)	30	30	90	150
9.	Elective Subject (Three)	30	30	90	150
Total Marks:					1200

LIST OF ELECTIVE SUBJECTS FOR DEAF AND DUMB

Sr.#	Subjects	Part-I	Part-II	Practical	Total
1.	Tailoring	30	30	90	150
2.	Embroidery	30	30	90	150
3.	Type Writing	30	30	90	150
4.	Carpet Making	30	30	90	150
5.	Derry Saazi	30	30	90	150
6.	Drawing	30	30	90	150
7.	Baking	30	30	90	150
8.	Hosiery	30	30	90	150
9.	Computer Science & Entrepreneurship	30	30	90	150
10.	Physical Education	30	30	90	150

- 2- اُمیدوار کے تعلیمی معیار (Learning Achievements) کو اس کے علم (Knowledge)، علم کی تفہیم، (Comprehensive)، علم کے اطلاق (Application) اور علم کے تجزیہ (Analysis) کی صلاحیتوں کی بنیاد پر جانچا جائے گا۔
- 3- سوالیہ پرچہ جات کے تین حصے ہونگے جن کی تفصیل درج ذیل ہے:-
- i- (a) حصہ معروضی 20% ہو گا جس کے سوالات کثیر الانتخاب (Multiple Choice) اور لیول امتحانات کی طرز (Pattern) پر ہونگے۔
 (b) مختصر جوابات (Short Answers) کے متقاضی سوالات 50% ہونگے۔
 (c) تفصیلی جوابات (Descriptive Answers) کے متقاضی سوالات 30% ہونگے۔
- ii- حصہ معروضی کے تمام سوالات حل کرنا لازمی ہوں گے جبکہ پرچہ انشائیہ کے حصہ اول اور حصہ دوم دونوں میں 33% چوائس ہوں گی۔
- iii- یہ امر یقینی بنایا جائیگا کہ پرچوں میں کیے جانے والے سوالات کتاب کے تمام ابواب کا احاطہ کرتے ہوں۔
- 4- معروضی قسم (Objective Type) کے سوالات کے جوابات (Bubble Sheet) پر دینے ہوں گے تاہم مختصر جوابات (Short Answers) اور تفصیلی جوابات (Descriptive Answers) منسلک جوابی کاپی پر حل کرنا ہوں گے۔
- 5- کسی اُمیدوار کو اجازت نہیں ہوگی کہ وہ اپنے ہمراہ (Objective Paper) کا کوئی سوال یا کسی سوال کا کوئی حصہ امتحانی مرکز سے باہر لے جائے۔
- 6- کسی بھی معروضی سوال (Objective Question) کے جواب میں کانٹ چھانٹ یا پہلے سے لکھے گئے جواب پر دوبارہ لکھا ہوا جواب غلط تصور ہوگا۔
- 7- جوابات لکھنے کے لیے صرف نیلی روشنائی کے استعمال کی اجازت ہوگی۔ کیلکولیٹر کے استعمال کی بھی اجازت ہوگی۔ بشرطیکہ خاص طور پر کسی حالت میں منع کیا گیا ہو، مینی کمپیوٹر قسم کے کیلکولیٹر دوران امتحان رکھنے یا استعمال میں لانے کی اجازت نہ ہوگی۔
- 8- پارٹ I (جماعت نہم) میں داخلہ بورڈ کے منظور کردہ / جاری کردہ شیڈول کے مطابق ہوگا۔
- 9- پارٹ I (جماعت نہم) اور پارٹ II (جماعت دہم) کے امتحانات کی تواریخ کا انعقاد ہر سال بورڈ کے اعلان کردہ شیڈول کے مطابق ہوگا۔
- 10- پارٹ I (جماعت نہم) کے رجسٹریشن / انزولمنٹ پارٹ II (جماعت دہم) کے لئے بھی کارآمد ہوگی۔
- 11- ریگولر اُمیدوار کے لئے ہر کلاس میں 75% حاضریاں پوری کرنی ہوں گی۔
- 12- پارٹ سسٹم کے تحت عملی اور تحریری امتحانات کا دورانیہ شائع شدہ سلیبس کے مطابق ہوگا۔
- 13- اگر کوئی اُمیدوار نامساعد حالات کی وجہ سے ریگولر تعلیم جاری نہیں رکھ سکتا تو وہ بطور پرائیویٹ اُمیدوار امتحان میں شامل ہو سکتا ہے۔

- 14- اُمیدوار کے داخلی تخمینہ کا گریڈ اداروں کی طرف سے پارٹ II (جماعت دہم) کے داخلہ فارم پر درج کیا جائے گا اور اس کا اندراج پارٹ II (جماعت دہم) امتحان کے سرٹیفکیٹ میں کیا جائے گا۔
- 15- جس اُمیدوار نے پہلے پارٹ II (جماعت دہم) سالانہ امتحان کے لیے داخلہ فارم بمعہ فیس جمع نہ کروائی ہو وہ اُمیدوار دوسرے امتحان میں نئے سرے سے (As a fresh candidate) امتحان دینے کا اہل ہو گا۔
- 16- پارٹ I (جماعت نہم) کا دوسرا سالانہ امتحان نہیں لیا جائے گا۔
- 17- پرائیویٹ اُمیدواروں کو یہ اجازت ہوگی کہ وہ چاہیں تو صرف پارٹ I (جماعت نہم) کا امتحان دیں اور اگر چاہیں تو پارٹ I اور پارٹ II (جماعت نہم) دہم کا امتحان ایک ساتھ دیں۔
- 18- اگر کوئی ریگولر اُمیدوار پارٹ I (جماعت نہم) میں شریک ہوتا ہے اور نامساعد حالات کی وجہ سے ریگولر تعلیم جاری نہیں رکھ سکتا تو وہ پارٹ II (جماعت دہم) میں بطور پرائیویٹ اُمیدوار شامل ہو سکتا ہے۔
- 19- اگر کوئی ادارہ نامساعد حالات کی وجہ سے پارٹ I (جماعت نہم) کے کسی اُمیدوار کا داخلہ فارم نہیں بھیج سکا تو ایسے اُمیدوار کو جماعت دہم میں ترقی دے دی جائے گی اور اس کا داخلہ پارٹ II (جماعت دہم / کمپوزٹ) میں حاضریاں پوری ہونے پر ارسال کرے گا اگر پارٹ II (جماعت دہم) میں نا مساعد حالات کی بناء پر حاضریاں پوری نہ ہوتی ہوں تو اسے Detain کر کے اس کا داخلہ آئندہ دوسرے سالانہ امتحان میں ارسال کرے گا۔
- 20- پارٹ II (جماعت دہم) میں داخلہ فارم بھجوانے کے بعد نامساعد حالات کی وجہ سے امتحان میں شرکت نہ کر سکنے والے اور اپنا گریڈ / نمبر بہتر بنانے والے اُمیدواران آئندہ امتحان میں شرکت کر سکیں گے۔
- 21- کوئی بھی اُمیدوار کسی ایک بورڈ کے پارٹ I (جماعت نہم) کے امتحان میں شرکت کے بعد پارٹ II (جماعت دہم) اور پارٹ I (جماعت نہم) کے فیل شدہ مضمون / مضامین کا امتحان مروجہ قواعد و ضوابط کے تحت کسی بھی دوسرے بورڈ میں دینے کا اہل ہو گا۔ لیکن یہ سہولت پورے تعلیمی دورانیہ (Academic Session) میں صرف ایک بار ہوگی اسی طرح سالانہ امتحان میں شرکت کے بعد تمام مضامین میں فیل ہونے والا اُمیدوار مائیکریشن کروا کر کسی بھی دوسرے بورڈ میں دوسرے سالانہ امتحان میں شرکت کر سکتا ہے۔
- 22- جماعت نہم کے امتحان میں شرکت کرنے والے طالب علم کا نتیجہ دو سال تک کارآمد ہوگا بشرطیکہ وہ اگلے سال پارٹ II (جماعت دہم) کے امتحان میں شریک نہ ہو اہو۔

23- اُمیدوار کو امتحان پاس کرنے کے لیے ہر مضمون کم از کم 33% نمبر حاصل کرنا ہوں گے۔

- i. The Candidate must obtain at-least 33% cumulative marks in theory papers I and II and;
- ii. The overall aggregate of the subject including practical and theory papers I and II becomes 33%,
- iii. In case where a candidate obtains marks less than 33% in aggregate or in theory papers (I and II), the candidate has to reappear in the particular paper (I or II) or Practical where the score is less than 33%.

Example:

Physics has 200 Marks in total. Part-I and II have 170 (85+85) and practical paper has 30 marks. If the candidate obtains 66/200 (33%) in Physics (Theory+Practical) he/she will be declared pass provided that the candidate has obtained at-least 56/170 (33%) in theory papers alone.

In case of less than 66/200 (33%) aggregate marks or less than 56/170 (33%) marks in theory alone;

- The candidate may reappear in the particular paper only (I or II) where marks are less than 28 or
- In practical only if marks are less than 10.

	Part-I	Part-II	Practical	Total	Result
Total Marks	85	85	30	200	
33% Marks	28	28	--	66	
Obtained Marks					
Case-I	28	28	10	66	Pass
Case-II	30	30	6	66	Pass
Case-III	33	33	0	66	Pass
Case-IV	20	40	6	66	Pass
Case-V	35	20	20	75	Reappear in Part-II Theory
Case-VI	6	46	25	77	Reappear in Part-I Theory
Case-VII	28	28	8	64	Reappear in Practical
Case-VIII	28	26	8	62	Reappear in Paper-II Theory & Practical
Case-IX	26	28	8	62	Reappear in Paper-I Theory & Practical
Case-X	26	26	8	60	Reappear in Paper-I Theory, Part-II Theory & Practical
Case-XI	27	27	10	64	Reappear in Paper-I and II Theory

The Letter Grades & Corresponding Percentile Scores -25

BOUNDARIES OF SCORES	LETTER GRADES
90-100	A+
87-89	A
82-86	B+
77-81	B
70-76	C+
60-69	C
50-59	D+
40-49	D
33-39	E
32 & Below	F

-26 پارٹ I (جماعت نہم) کے اُمیدواران کو صرف نتیجہ کا اطلاع نامہ جاری کیا جائے گا۔ پارٹ II (جماعت دہم) امتحانات کے مجموعی نمبروں کو ملا کر اُمیدواروں کو گریڈ دیئے جائیں گے۔

-27 اُمیدوار کے حاصل کردہ نمبر اور اسکے گریڈ دونوں کا اندراج اس کے سرٹیفکیٹ پر کیا جائے گا۔

-28 سیکنڈری سکول امتحان پاس کرنے کے لیے اُمیدوار کے پارٹ I اور پارٹ II کے مجموعی نمبروں کو ملا کر متعلقہ مضمون میں پاس یا فیل شمار کیا جائیگا۔ کمپارٹمنٹ کے مضمون/ مضامین کو پاس کرنے کے لیے اگلے فوری تین امتحانی مواقع دیئے جائیں گے۔ اس شق کے تحت ہر اُمیدوار کو پارٹ I اور پارٹ II کے امتحانات میں ایک ساتھ شریک ہونا ہوگا۔ تاہم اگر کوئی اُمیدوار کسی مضمون کے کسی پارٹ میں غیر حاضر رہتا ہے اور دوسرے پارٹ میں وہ اتنے نمبر حاصل کر لیتا ہے کہ اس کے حاصل کردہ نمبر اس مضمون کے دونوں پارٹس کے پاس مارکس کے مجموعہ کے برابر یا زیادہ بھی ہو جائیں تو پھر بھی اس کو اس مضمون میں پاس نہیں کیا جائے گا۔ کیونکہ کسی ایک پارٹ میں غیر حاضر رہنے کی بنا پر دوسرے پارٹ میں اس نے کوئی نمبر حاصل نہیں کیا اس لیے غیر حاضر پارٹ کو دوسرے پارٹ کے حاصل کردہ نمبروں کے ساتھ ملایا نہیں جاسکتا لہذا اس کو اس پارٹ میں فیل کر دیا جائے گا جس میں کہ وہ غیر حاضر رہا اور اس کو فیل شدہ مضمون/ مضامین جن میں وہ غیر حاضر رہا تھا پاس کرنے کے لیے قواعد کے مطابق امتحانی مواقع/ مواقع دیئے جائیں گے۔

-29 پارٹ I کا نتیجہ مرتب کرتے وقت اُمیدواران کو مجموعی طور پر پارٹ I اور پارٹ II کے امتحان پاس کرنے کے لیے کل نمبروں کے ایک فیصد تک رعایتی نمبر دیئے جائیں گے۔ پارٹ I کا نتیجہ مرتب کرتے وقت کوئی رعایتی نمبر نہیں دیئے جائیں گے۔

-30 پارٹ I (جماعت نہم) کے ایسے امیدواران جن کا ناجائز ذرائع استعمال کرنے پر ایک یا ایک سے زیادہ امتحانات کے لیے نااہل قرار دیا گیا ہو گا۔ وہ سزا ختم ہونے کے بعد آئندہ سالانہ امتحان میں پارٹ I اور پارٹ II (جماعت نہم و دہم) کے امتحان میں ناجائز ذرائع کے استعمال کرنے پر امیدوار کو مروجہ قوانین کے تحت نمٹایا جائے گا۔

- 31 For the purpose of improving marks/grades, candidates will be provided with four examination opportunities in the same subjects or subject groups in which they previously passed examinations, the following the current prevalent syllabi. These opportunities can be availed within a period of four (4) years of passing the SSC and Intermediate examinations, provided that they are utilized before appearing in any higher examinations conducted by any examining body.
- Candidate will need to submit an affidavit, of marks not attaining higher degree, if improvement chances are availed beyond two years of first attempt.
- The Candidate may appear in following categories:
- (a) In subject(s) of his choice (subject means Part-I + Part-II + Practical)
- (b) In Part-I (c) In Part-II (d) In Part-I and Part-II both (e) In any paper(s) of Part-I or Part-II (f) The highest marks obtained by the candidate will be counted toward final result.
- Old posting (previous result) will be taken from the last improved result which will carry the highest marks obtained in a paper after multiple attempts.
- In case, a candidate remains absent after applying for improvement, his old posting (previous result) will continue.
- Grace-Marks subject(s) must be re-taken with improvement attempt and no Grace Marks will be allowed in case of improvement.

-32 گریڈ یا نمبر بہتر بنانے کے لیے سیکنڈری سکول کا امتحان امیدوار صرف اسی بورڈ میں دے سکے گا جس بورڈ سے اس نے سیکنڈری سکول امتحان پاس کر کے سند حاصل کی ہوگی۔

-33 امیدوار پارٹ I کا نتیجہ چھوڑنے (Forgo) کے بعد پارٹ I اور پارٹ II کا امتحان اکٹھا دے سکتا ہے مگر ایسے امیدوار کو امتحان پاس کرنے کے بعد نمبر بہتر بنانے کے کا چانس نہیں ملے گا۔

- i. A candidate may appear in any number of additional subject/s along with his/her group of subjects already opted at SSC/ HSSC level in the same Board from where he/she appeared in the SSC/HSSC examination. To qualify the additional subject/s a candidate may avail the same number of attempts as available for the regular candidate to qualify the said examination.
- 34 ii. A candidate desirous of appearing in the subject(s) at the level of HSSC examination having practical shall take admission in affiliated institution as regular student, attend classes and perform practical in laboratory. Institutions shall forward his/her registration and admission as regular student. However, the candidate shall appear in both papers i.e. part-I and Part-II in 1st annual and 2nd annual examinations in the current course not offered by him/her previously.

-35 ایسے امیدوار جنہوں نے بورڈ سے ادیب، عالم فاضل (علوم شرقیہ) یا کوئی مساوی امتحان پاس کیا ہو وہ کسی بھی امتحانی سیشن میں سیکنڈری سکول سرٹیفکیٹ کے امتحان میں درج ذیل طریق سے امتحان میں شرکت کے اہل ہوں گے اور انھیں پارٹ I (جماعت نہم) اور پارٹ II (جماعت دہم) کا امتحان اکٹھا دینا ہوگا۔

انگریزی، مطالعہ پاکستان، ریاضی اور آرٹس گروپ کا ایک مضمون (مگر وہ زبان نہ ہو) ایسے امیدواروں کو امتحان پاس کرنے پر سیکنڈری سکول سرٹیفکیٹ سطح کی سند جاری کی جائے گی اور ان کے گریڈ کا فیصلہ حاصل کردہ نمبروں کی بنیاد پر گریڈیشن رولز کے تحت کیا جائے گا۔ مذکورہ امیدواران کا نتیجہ مرتب کرتے وقت کل نمبروں کا ایک فیصد رعایتی نمبر دیئے جائیں گے۔ اور انہیں بورڈ رول کے مطابق مارکس امپروو کی سہولت حاصل ہوگی۔

- 36- ایسے اُمیدواران جنہوں نے کسی بھی تنظیم / اوفاق المدارس / رابطہ وغیرہ سے / شہادت ثانویہ / عامہ / خاصہ وغیرہ کا امتحان پاس کیا ہوں اور ان کی سند متعلقہ تنظیم / اوفاق المدارس / رابطہ وغیرہ سے تصدیق شدہ ہو تو وہ اردو، انگریزی اور مطالعہ پاکستان کے مضامین کا امتحان کسی بھی امتحانی سیشن میں اکٹھا (ایک ہی نشست میں) پاس کرنے کے اہل ہونگے تاہم ایسے اُمیدواران کو IBCC کی طرف سے جاری کردہ لیٹر، رول نمبر سلیپس کے اجراء سے قبل بورڈ کو فراہم کرنا لازم ہو گا اور انہیں اس کی سند جاری کی جائے گی مذکورہ اُمیدواران کا نتیجہ مرتب کرتے وقت کل نمبروں کا ایک فیصد رعایتی نمبر دیئے جائیں گے۔ اور انہیں بورڈ رول کے مطابق مارکس امپروو کی سہولت حاصل ہوگی۔
- 37- بورڈ قواعد کے مطابق درج ذیل (Category) کے امتحان کے کسی بھی اُمیدوار کو اردو لازمی کی بجائے جغرافیہ پاکستان میں امتحان دینے کی اجازت دی جاسکتی ہے بشرطیکہ وہ:
- (الف) غیر ملکی طلباء / طالبات یا ایسے پاکستانی طلباء / طالبات جنہیں بیرون ملک سیکنڈری سکول امتحان کی سطح تک اردو پڑھنے کی سہولت میسر نہ آئی ہو۔
- (ب) ایسے پاکستانی طلباء / طالبات جو امتحان کے انعقاد سے تین سال قبل مسلسل بیرون ملک مقیم رہے اور انہیں بیرون ملک سیکنڈری سکول کی سطح پر اردو پڑھنے کی سہولت میسر نہ آئی ہو۔
- 38- سیکنڈری سکول کے کسی بھی مضمون کا حتمی نتیجہ (پاس یا فیل) کا تعین جماعت نہم و دہم کے امتحان کے مجموعی نمبروں کی بنیاد پر کیا جائے گا۔ جماعت نہم امتحان میں 33% سے کم نمبروں والے مضمون / مضامین میں اگر کوئی اُمیدوار جماعت دہم کے ساتھ دینا چاہے تو اسے اس کی اجازت ہوگی بصورت دیگر ان کا نتیجہ جماعت نہم کے مذکورہ مضمون / مضامین کے سابقہ حاصل کردہ نمبروں کی بنیاد پر مرتب کیا جائے گا۔ جماعت نہم اور دہم کو ایک ہی امتحان تصور کیا جائیگا اور اُمیدوار کی اس امتحان کے تمام مضامین میں شرکت اس کے الاٹ شدہ امتحانی مرکز میں حاضر ہونے پر مشروط ہوگی۔ بیماری یا دیگر کسی بھی وجہ سے کوئی اضافی موقع نہیں دیا جائیگا اور امتحانی مرکز سے غیر حاضری تصور کی جائے گی۔
- 39- جماعت نہم کے پاس یا 33% سے کم نمبر حاصل کرنے والے اُمیدواران دوبارہ جماعت نہم کا امتحان دے سکتے ہیں ایسے اُمیدواران کو اپنا مضمون / مضامین / گروپ بھی تبدیل کرنے کی اجازت ہوگی ایسے اُمیدواران کی پہلے والی رجسٹریشن بحال رہے گی۔ تاہم ریگولر / پرائیویٹ پاس اُمیدواران کے لیے ضروری ہے کہ وہ جماعت نہم کے رزلٹ (RESULT) کی اشاعت کے 30- ایام کے اندر اپنا رزلٹ / نتیجہ مجوزہ فیس جمع کروا کر منسوخ / کینسل کروائیں۔
- 40- ایسے اُمیدوار جو O-A Level / ثانویہ عامہ / ثانویہ خاصہ وغیرہ کا امتحان پاس کرنے کے بعد IBCC کی طرف سے جاری کردہ لیٹر کے مطابق ایڈیشنل مضمون / مضامین کا امتحان پاس کرنے کے بعد بورڈ قانون کے مطابق نمبر بہتر / گریڈ بہتر بنانے کے لیے چار (4) سال کے اندر چار (4) مواقع حاصل کر سکتے ہیں۔ مزید براں ایسے اُمیدواران کو کسی بھی قسم کے رعایتی نمبر نہیں دیئے جائیں گے۔

اُردو (لازمی)

وقت 2:30 گھنٹے	پارٹ۔ I (جماعت نہم)	75 نمبر
----------------	---------------------	---------

حصہ معروضی

سوال نمبر ۱: معروضی حصہ کا وقت 20 منٹ ہو گا جسمیں 15 سوال 15 نمبر کے ہونگے تمام سوالات حل کرنے ہونگے۔
 ہر سوال ایک نمبر کا ہو گا۔ (مذکر / مونث، واحد / جمع، مترادف / متضاد الفاظ سے متعلقہ کثیر الانتخاب سوالات)
 وقت: 2:10 گھنٹے

انشائی حصہ

سوال نمبر ۲: حصہ اول نظم و غزل پر مشتمل ہو گا۔ تین اشعار حصہ نظم اور دو حصہ غزل سے ہونگے۔
 10 نمبر

حصہ دوم

سوال نمبر ۳: اقتباسات کی تشریح نیز تشریح سے پہلے حوالہ متن، خط کشیدہ الفاظ کے معانی اور سبق کا سیاق و سباق
 سوال نمبر ۴: مختصر جوابات (کوئی سے پانچ)
 سوال نمبر ۵: سبق کا خلاصہ
 سوال نمبر ۶: نظم کا مرکزی خیال اور شاعر کا نام
 سوال نمبر ۷: خط / درخواست
 سوال نمبر ۸: کہانی / مکالمہ
 سوال نمبر ۹: فقروں کی درستگی / تکمیل
 10 نمبر
 10 نمبر
 05 نمبر
 05 نمبر
 10 نمبر
 05 نمبر
 05 نمبر

وقت 2:30 گھنٹے	پارٹ۔ II (جماعت دہم)	75 نمبر
----------------	----------------------	---------

حصہ معروضی

سوال نمبر ۱: معروضی حصہ کا وقت 20 منٹ ہو گا جسمیں 15 سوال 15 نمبر کے ہونگے۔ تمام سوالات حل کرنے ہونگے۔
 ہر سوال ایک نمبر کا ہو گا۔

انشائی حصہ

وقت: 2:10 گھنٹے
 سوال نمبر ۲: حصہ اول نظم و غزل پر مشتمل ہو گا۔ تین اشعار حصہ نظم اور دو حصہ غزل سے ہونگے۔
 10 نمبر

حصہ دوم

سوال نمبر ۳: نظریات کی تشریح سبق کا عنوان، مصنف کا نام اور خط کشیدہ الفاظ کے معانی
 سوال نمبر ۴: کوئی سے پانچ سوالات کے مختصر جوابات
 سوال نمبر ۵: سبق کا خلاصہ
 سوال نمبر ۶: درج ذیل عنوانات میں سے کسی ایک پر مضمون
 سوال نمبر ۷: درج ذیل عبارت غور سے پڑھ کر نیچے دیئے گئے سوالات کے جوابات دیں۔
 5+5 نمبر
 10 نمبر
 05 نمبر
 15 نمبر
 10 نمبر

اُردو (برائے جماعت دہم)

اُردو (برائے جماعت نہم)

مصنفین و مولفین: مصنف: ڈاکٹر علی محمد خاں، زیر نگرانی: ڈاکٹر جمیل الرحمن، پروفیسر ڈاکٹر رفیع الدین ہاشمی
 ظہیر کاشر وٹو، سرفراز احمد فتنانہ
 صدر شعبہ اُردو (ر) جامعہ پنجاب، لاہور
 مدیر: ڈاکٹر نجیب جمال (تمغہ امتیاز)
 ڈاکٹر عبداللہ شاہ ہاشمی، سینئر ماہر مضمون اُردو (ر)
 ناشر: اقراء اشرفیہ کمپنی
 مطبع: اسحاق الفتح پریس
 علمی کتب خانہ اُردو بازار، لاہور۔
 برائے پنجاب ٹیکسٹ بک بورڈ لاہور۔
 برائے پنجاب ٹیکسٹ بک بورڈ لاہور۔



اُردو قواعد وانشا

کل نمبر: 75

جماعت نہم و دہم

وقت: 2 گھنٹے

انشا پر وازی	قواعد زبان
• خطوط نویسی	• لفظ، جملہ، کلمہ اور مہمل
• خط لکھنے کے لیے ضروری باتیں	• مرکب اور ہم رتبہ جملے
• نمونے کے چند خطوط	• منقوط، غیر منقوط اور بھاری حروف
• عرائض نویسی	• کلمے کی قسمیں
• عرائض نویسی کے لیے ہدایات	• حروف شمسی و قمری
• رسید لکھنا	• اسم کی قسمیں (بلحاظ معنی)
• نمونے کی چند درخواستیں	• اسم معرفہ، اسم معرفہ کی اقسام
• رسید لکھنے کے لوازمات	• اسم کی قسمیں (بلحاظ ساخت)
• نمونے کی چند رسیدات	• جنس اور عدد
• مکالمہ نگاری	• فعل، فعل کی اقسام
• نمونے کے چند مکالمے	• افعال معاون
• کہانی لکھنا، چند ضروری باتیں	• حروف، حروف کی اقسام
• نمونے کی چند کہانیاں	• مترادف اور متضاد الفاظ
• مضمون نگاری	• ذو معنی اور باہم مماثل الفاظ
• چند مضامین	• رموز و اوقاف
• مضامین کی اقسام	• مرکبات، مرکبات کی اقسام
• مضامین کے لیے دیگر عنوانات	• سہلے اور لاحقے
• تفہیم عبارت، ضروری باتیں	• "نے" اور "کو" کا استعمال
• چند عبارات، سوالات اور جوابات	• تلفظ
• مشق کے لیے عبارات	• علم بیان، ضائع بدائع
	• روزمرہ اور محاورہ، ضرب الامثال

ایجوکیشن بورڈ کے مطابق جماعت وار عنوانات کی تقسیم

جماعت نہم	درخواست، خط، رسید، کہانی، مکالمہ، روزمرہ و محاورہ، ضرب الامثال، غلط جملوں کی درستی 'نے' اور 'کو' استعمال، فعل کی فاعل کے ساتھ مطابقت، اسم صفت اور اسم موصوف میں مطابقت، جملوں کی تکمیل، واحد جمع، مذکر مونث، مترادف الفاظ۔
جماعت دہم	مضامین، تفہیم عبارت، تشبیہ، استعارہ، مجاز مرسل، ذو معنی اور مماثل الفاظ، تلفظ (اعراب)، صرف و نحو (اسم، فعل، حرف اور ان کی اقسام)۔

مصنفین:- ڈاکٹر مس عارفہ سید زہرا

اصغر علی شیخ

پروفیسر سید وقار عظیم

ڈاکٹر سہیل بخاری

مرزا ہادی علی بیگ

مولانا مرتضیٰ حسین فاضل

پنجاب کریکولم اینڈ ٹیکسٹ بک بورڈ، لاہور

تیار کردہ:-



GEOGRAPHY OF PAKISTAN

(For foreign students and other special cases in lieu of Urdu Compulsory)

Part – I	75 Marks
Part – II	75 Marks
Total	150 Marks

Part-I (Class-IX)		Marks: 75	Time: 2:30 Hours
SYLLABUS	SECTION I – INTRODUCTION	WEIGHT	
1. The Creation of Pakistan	Neighbors, Administrative Divisions and Emergence of Pakistan	06%	
	SECTION II – ENVIRONMENT		
2. Land form	Mountains, Plateaus, Plains, Deserts, and Rivers, Physiographic decisions.	08%	
3. Climate	Factors affecting Climate of Pakistan Temperature, Rainfall and Climate Regions.	08%	
4. Natural Vegetation	Types and distribution, Importance, deforestation and afforestation.		
5. Soils	Soil formation, soil types.	05%	
6. Environmental Problems	Floods, Landslides, erosion, aridity, earthquake and pollution.	06%	
	SECTION III – PROFIT		
7. Population	Size, Growth, Urbanization, Distribution of rural population, Occupation, Employment and population problems.	07%	
8. Cities and Villages	Geographical characteristics of Pakistani villages and cities, function and importance of Islamabad, Karachi, Lahore, Peshawar and Quetta.		

Part-II (Class-X)		Marks: 75	Time: 2:30 Hours
SYLLABUS	SECTION IV – ECONOMY	WEIGHT	
9. Resource Natural and Human	Definition and importance, Natural, Land, Water, Minerals, Energy, Forests etc, Human: Age composition, level of education, skilled, semi-skilled and unskilled resources.	08%	
10. Agriculture, Irrigation and related	Importance of Irrigation, Modes of irrigation, canals, karez, wells, and Indus Water Treaty, water logging and salinity.	07%	
11. Agriculture, Crops and Livestock	Methods and cultivation, traditional recent changing trends, Agricultural Land use, Wheat, Rice Maize, Sugarcane and Cotton, Livestock.	10%	
12. Industry	Factors for location of industries, Factory Industries, iron and Steel, ship building, cotton textile, woolen Sugar, Chemical and Cement.	09%	
13. Means of transport	Transport importance, Railways, Roads, Airways, Sea Ports.	08%	
14. Trade	Importance internal and external trade, Exports and Imports.	08%	

Prescribed Book: Geography of Pakistan

Authors: Mian Muhammad Aslam

Published by: M/S Maktaba Moeen-UI-Adab Urdu Bazar, Lahore
For: Punjab Curriculum and TextBook Board, Lahore



ENGLISH

Part-I (Class-IX)	Marks: 75	Time: 2.30 Hours
--------------------------	------------------	-------------------------

OBJECTIVE PART

There will be One Question consist of Four Portion. The Objective Marks will be **19** and time **20** minutes.

- Q.No.1 (a): Choose the correct from verb and fill up the bubbles **05**
 (b): Choose the word with correct spellings and fill up the bubbles. **04**
 (c): Choose the correct meanings of underlined word and fill up the bubble. **05**
 (d): Choose the correct option according to the grammar and fill up the bubbles. **05**

SUBJECTIVE PART

The Total Marks of Subjective Part will be **56** and time will be **02:10** hrs.

- Q.No.2 Answer any five of the following questions. **(2×5=10)**
 (66% Question From Exercises 34% From Text)
- Q.No.3 Translate any two of the following paragraphs into under / Re-write into simple English. (From Text Book) **(4+4=8)**
- Q.No.4 Write down the summary of the poem. (From Text Book) **05**
OR Explain the stanza with reference to the context.
- Q.No.5 Use any five words / phrases / idioms in your sentences. **05**
- Q.No.6 Write a letter or story or dialogue. **08**
- Q.No.7 Read the passage and answer the questions at the end. **(2×5=10)**
- Q.No.8 Translate any five sentences into English. **05**
- Q.No.9 Change the voice. **05**

Book: English Book-I

Authors: Ruhi Zaka Malik, Fatima Dar, Zarqa Bashir

Publisher: Punjab Curriculum and TextBook Board, Lahore

Part-II (Class-X)	Marks: 75	Time: 2.30 Hours
--------------------------	------------------	-------------------------

OBJECTIVE PART

There will be One Question consist of Four Portions. The Objective Marks will be **19** and time **20** minutes.

- Q.No.1 (a): Choose the correct form of verb and fill up the bubbles. **05**
 (b): Choose the word with correct spellings and fill up the bubbles. **04**
 (c): Choose the correct meanings of underlined word and fill up the bubble. **05**
 (d): Choose the correct option and fill up the bubbles. **05**

SUBJECTIVE PART

The Total Marks TO Subjective Part will be **56** and time will be **02:10** hrs.

SECTION-I

- Q.No.2 Write short Answers to any five of the following questions. **10**

SECTION-II

- Q.No.3 Translate into Urdu / Re-write into simple English from English. **08**
- Q.No.4 Write down the summary of the poem. **05**
OR Paraphrase the following lines into simple English with reference to context.
- Q.No.5 Write an Essay of 150-200 words on any one of the following topics. **15**
OR Write a paragraph of 100-150 words on any one of the following topics.
- Q.No.6 Change any five of the following sentences into indirect Form. **05**
- Q.No.7 Use any five of the following pairs of words in your own Sentences. **05**
- Q.No.8 Translate from Urdu into English paragraph. **08**
OR Write ten sentences about "A House on Fire".

Book: English Book-II

Authors: Sobia Kiyani

Publisher: The Caravan Book House, Lahore.

For: Punjab Curriculum and TextBook Board, Lahore



ENGLISH GRAMMAR & COMPOSITION

Vocabulary

Forms of verb

Table of Question Words, Some More Weak Verbs

Tenses

- Lesson-1** Use of introductory 'it' and 'there'
- Lesson-2** Use of 'is / am / are' and 'was / were'
- Lesson-3** Use of 'has' and 'have', Use of 'Had'
- Lesson-4** Present Indefinite Tense (Active Voice), Present Continuous Tense (Active Voice), Present Perfect Tense (Active Voice), Present Perfect Continuous Tense (Active Voice), Present Indefinite Tense (Passive Voice), Present Continuous Tense (Passive Voice), Present Perfect Tense (Passive Voice)
- Lesson-5** Past Indefinite Tense (Active Voice), Past Continuous Tense (Active Voice), Past Perfect Tense (Active Voice), Past Perfect Continuous Tense (Active Voice), Past Indefinite Tense (Passive Voice), Past Continuous Tense (Passive Voice), Past Perfect Tense (Passive Voice)
- Lesson-6** Future Indefinite Tense (Active Voice), Future Continuous Tense (Active Voice), Future Perfect Tense (Active Voice), Future Perfect Continuous Tense (Active Voice), Future Indefinite Tense (Passive Voice), Future Perfect Tense (Active Voice), Paragraphs

Parts of Speech

Direct and Indirect Speech, Pair of words

Story Writing

Introduction, Story Planner, Rubric for Story Writing, Specimen, A Farmer and His Sons, The Kindness of Rasoolullah (خَاتَمُ النَّبِيِّينَ صَلَّى اللَّهُ عَلَيْهِ وَسَلَّمَ), Robbers Turn into Good Citizens, The Muslim Brotherhood, A Foolish Stag, The Donkey Trapped in His Own Trick, A Friend in Need is a Friend Indeed, A Faithful Friend, A Big Reward, The Tailor and the Elephant, The Boy Who Cried "Wolf", The Jester and the King, Exercise

Letter Writing

to your mother who is worried about your health, to your father asking him about the health of your mother, to your sister congratulating her on her success in the exams, to your mother about the test you have just taken, to your father requesting him to send you some extra funds for the payment of hostel dues, to your brother about the importance of the study of science subjects, to your friend congratulating her on her birthday, to your friend requesting her to spend her spring holidays with you, to your friend congratulating him on the marriage of his sister, to your friend requesting him to lend you some books, to your friend thanking her for the hospitality during your visit to her house, to your friend condoling the death of his mother, to your brother advising him to take steps to improve his health, to your sister thanking her for a gift, to your friend thanking him for the books he lent to you, to a bookseller requesting him to send you some books per, Formal Invitations / Replies

Applications

for leave, for fee-concession / stipend, for character certificate, for a job

Dialogue Writing

Rubric for Dialogue Writing

between a teacher and a student, between two students regarding Salat, asking one's way, between a brother and a sister concerning time, between a tailor and a customer

Paragraph Writing

My School, A Visit to Muesum, A Pleasant Dream, An Industrial Exhibition, Kitchen Gardening, A Hobby, Computers, Girl Guides, A River in Flood, How to Keep Our Town Clean?, My Neighbour, Pakistani Women

Exercises with Hints

A Fortune-teller, A Street Quarrel, A Visit to a Zoo, The Teacher I Like the Best, A Picnic, A Visit to a Historical Place, Allama Iqbal, A House on Fire

Writing an Essay

My Last Day at School, My House, Libraries, The Monsoon /A Rainy Day, A Hockey Match, A True Muslim, Village Life, A Visit to a Hill Station, Tolerance, Sports and Games, Courtesy, Health, A Scene at a Railway Station, A Cricket Match, Life in a Big City, Television, Quaid-e-Azam Muhammad Ali Jinnah, Boy Scouts

Essays in Outline

My Favourite Book, My Hobby, My Best Friend, My Ambition, Our School Canteen

Exercise**Topics for Grade 9**

Vocabulary, Forms of Verb, Tenses (Translation), Parts of Speech ((Noun, Pronoun, Adjective, Articles, Preposition, Verb, Conjunction, Interjection, Active and Passive Voice), Story Writing, Letters, Application and Invitations, Dialogue Writing, Comprehension Passages

Topics for Grade 10

Forms of Verbs, Writing an Essay/Paragraph Writing, Tenses (Translation of Urdu Paragraphs into English), Pair of Words, Parts of Speech (Noun, Pronoun, Adjective, Articles, Preposition, Verb, Conjunction, Interjection, Direct and Indirect Speech, Pair of Words)

Authors: Prof.B.A. Chishti, Prof. Fazal-ur-Rehman Butt,
Abdul Qadeer Hashmi

Published by: Sheikh Shoukat Ali Printers & Publishers



اسلامیات (لازمی)

کل نمبر: 100

(برائے جماعت نہم)

وقت: 03:00 گھنٹے

باب اول: قرآن مجید و حدیث نبوی ﷺ صَلَّی اللہُ عَلَیْہِ وَاٰلِہٖ وَسَلَّم

الف: قرآن مجید کی تدوین اور اس کی حفاظت ب: حفاظت و تدوین حدیث (دور اول)

ج: احادیث نبویہ ﷺ صَلَّی اللہُ عَلَیْہِ وَاٰلِہٖ وَسَلَّم

باب دوم: ایمانیات و عبادات

(الف) ایمانیات: (1) عقیدہ توحید (2) عقیدہ رسالت (3) ملائکہ (فرشتے)

(4) کُتُب سماویہ (آسمانی کتابیں) (5) عقیدہ آخرت

(ب) عبادات: (1) نماز (2) روزہ (3) زکوٰۃ (4) حج اور قربانی

باب سوم: سیرت نبوی ﷺ صَلَّی اللہُ عَلَیْہِ وَاٰلِہٖ وَسَلَّم

(الف) عہد نبوی ﷺ صَلَّی اللہُ عَلَیْہِ وَاٰلِہٖ وَسَلَّم کے ماہ و سال (مدنی دور)

(1) فتح مکہ (2) غزوہ خنین (3) عام الوفود (9 ہجری)

(4) غزوہ تبوک (5) حجۃ الوداع

(6) وصال نبوی ﷺ صَلَّی اللہُ عَلَیْہِ وَاٰلِہٖ وَسَلَّم

(ب) اُسوہ رسول ﷺ صَلَّی اللہُ عَلَیْہِ وَاٰلِہٖ وَسَلَّم اور ہماری زندگی

(1) حضرت محمد مصطفیٰ ﷺ صَلَّی اللہُ عَلَیْہِ وَاٰلِہٖ وَسَلَّم کا بچپن اور جوانی

(2) حضرت محمد مصطفیٰ ﷺ صَلَّی اللہُ عَلَیْہِ وَاٰلِہٖ وَسَلَّم کا ذوقِ عبادت

(3) حضرت محمد مصطفیٰ ﷺ صَلَّی اللہُ عَلَیْہِ وَاٰلِہٖ وَسَلَّم کی سخاوت و ایثار

(4) صلہ رحمی (5) خواتین کے ساتھ حسن سلوک (6) انداز تربیت

باب چہارم: اخلاق و آداب

(1) شکر و قناعت (2) امانت و دیانت (3) اخلاص و تقویٰ (4) پردہ پوشی

بُری عادات سے اجتناب

(1) تکبر (2) حسد (3) جھوٹ (4) غیبت اور بہتان

(5) جادو، فال اور توہم پرستی

باب پنجم: حسن معاملات و معاشرت

(1) قسَم کے احکام و مسائل (2) گواہی کے احکام و مسائل (3) حُقوقِ العباد (ہمسایوں کے حقوق)

(4) سُود کی حرمت (5) اسلامی ریاست (6) جہاد فی سبیل اللہ

باب ششم: ہدایت کے سرچشمے اور مشاہیر اسلام

اہل بیت اطہار رضی اللہ تعالیٰ عنہم

(1) حضرت امام زین العابدین رحمۃ اللہ علیہ (2) حضرت امام زید بن علی رحمۃ اللہ علیہ

صحابہ کرام رضی اللہ تعالیٰ عنہم

(1) حضرت ابو موسیٰ اشعری رضی اللہ تعالیٰ عنہ (2) حضرت عبداللہ بن عمرو بن العاص رضی اللہ تعالیٰ عنہما

(3) حضرت عمرو بن أمیہ رضی اللہ تعالیٰ عنہ (4) حضرت عمرو بن العاص رضی اللہ تعالیٰ عنہ

(5) حضرت جابر بن عبداللہ رضی اللہ تعالیٰ عنہ (6) حضرت انس بن مالک رضی اللہ تعالیٰ عنہ

صحابیات رضی اللہ تعالیٰ عنہن صوفیہ کرام رحمۃ اللہ علیہم علما و مفکرین رحمۃ اللہ علیہم

باب ہفتم: اسلامی تعلیمات اور عصر حاضر کے تقاضے

(1) خود اعتمادی و خود انحصاری (2) جسمانی و ذہنی صحت اور جسمانی ریاضت

(3) اسلام میں مستقبل کی منصوبہ بندی کی اہمیت (4) اسلامی تہذیب کے امتیازات

کتاب: اسلامیات (لازمی) برائے جماعت نہم ماڈل پرچہ اسلامیات (لازمی) برائے جماعت نہم کتاب کے صفحہ نمبر 164 پر موجود ہے۔

مصنفین: ڈاکٹر فخر الزمان، محمد صفدر جاوید ناشر: جامعہ اشرفیہ

مطبع: اسحاق الفتیچ پریس (برائے پنجاب کریکولم اینڈ ٹیکسٹ بک بورڈ)



اخلاقیات

کل نمبر: 50

پارٹ-I (جماعت نہم)

وقت: 02:00 گھنٹے

- باب نمبر 1- مذاہب کا تعارف • مذہب کی ذاتی اور نفسیاتی اہمیت • مذہب، سماج اور اخلاق
- باب نمبر 2- جین مت • تعارف اور ارتقا • جین مت کا ادب اور فن تعمیر
- باب نمبر 3- اخلاق و اقدار • خدا کی عظمت • عبادت گاہوں اور عبادات کے انسانی رویوں پر اثرات
- سناٹن ہندو دھرم اور عبادت • بدھ مت اور عبادت • زرتشت اور عبادت
- مسیحیت اور عبادت • اسلام اور عبادت • سکھ مذہب اور عبادت
- باب نمبر 4- آداب • عبادت گاہوں کے آداب (مندر، وہارہ، سینا گاک، گر جاگھر، مسجد اور گوردوارہ)
- عوامی مقامات کے آداب (دفاتر، بینک، ہسپتال، پارک)
- باب نمبر 5- مشاہیر • امام غزالی رَحْمَةُ اللہِ عَلَیْہِ • فلورنس نائٹ انگیل
- فرہنگ
- مصنفین:- ڈاکٹر عبد اللہ شاہ ہاشمیڈاکٹر محمد شفیع مرزا تیار کردہ:- پنجاب کریکولم اینڈ ٹیکسٹ بک بورڈ، لاہور

کل نمبر: 50

پارٹ-II (جماعت دہم)

وقت: 02:00 گھنٹے

- باب نمبر 1- مذاہب کا تعارف • مشکلات کے حل میں مذاہب کی رہنمائی • گناہ اور جرم کا تصور
- باب نمبر 2- مہاویر • حالات زندگی • مہاویر کے ہم عصر مذہبی راہنما • مہاویر کی تعلیمات
- باب نمبر 3- اخلاق و اقدار • عبادت کے انسانی زندگی پر اثرات (مذاہب عالمی کی روشنی میں) • عالمی مذاہب میں اخلاقی اقدار
- انسانی کردار سازی پر احتساب کے اثرات • مذہبی تعلیمات میں پابندی وقت کی اہمیت
- باب نمبر 4- عوامی مقامات کے آداب • ریلوے اسٹیشن • بس اسٹینڈ • ہوائی اڈا
- بازار (مارکیٹ)
- باب نمبر 5- مشاہیر • فلاسفر ارسطو • عمان ویل کانٹ • سری اربندو گھوش
- فرہنگ
- مصنفین:- ڈاکٹر عبد اللہ شاہ ہاشمیڈاکٹر محمد شفیع مرزا تیار کردہ:- پنجاب کریکولم اینڈ ٹیکسٹ بک بورڈ، لاہور



PAKISTAN STUDIES

Marks: 100**(Class-X)****Time: 03:00 Hours****Chapter 1 : IDEOLOGICAL BASIS OF PAKISTAN**

- 1.1 Definition, Sources and Significance of Ideology
Ideology, Importance of Ideology
- 1.2 Meanings of the Ideology of Pakistan
Sources of Ideology of Pakistan:
Common Religion, Common Political Objectives, Common Educational Objectives, Common Economic Objectives, Common Cultural Objectives
- 1.3 Islamic Values, Muslim Reformers, Social and Cultural Conditions of the Muslims of the Sub-continent, Awareness about Ideology of Pakistan
- 1.3 Elements of Ideology of Pakistan
Beliefs, Pillars of Islam, Rule of Law, Equality and Brotherhood, Justice and Equality
- 1.4 Two-Nation Theory: Origin and Evolution
Two-Nation Theory in the Sub-continent, Sir Syed Ahmad Khan and Two-Nation Theory, Ch. Rahmat Ali and Two-Nation Theory
- 1.5 Economic Deprivation of Muslims in India
- 1.6 Allama Iqbal and Ideology of Pakistan
- 1.7 Quaid-e-Azam and Ideology of Pakistan

Chapter 2 : THE PAKISTAN MOVEMENT AND EMERGENCE OF PAKISTAN

- 2.1 Background of Pakistan Movement:
Aligarh Movement and Sir Syed Ahmed Khan, Partition of Bengal 1905, Simla Deputation 1906, Establishment of Muslim League 1906, Minto-Morley Reforms 1909, Lucknow Pact 1916, Khilafat Movement 1919, Non-Cooperation Movement 1920, Hijrat Movement 1920, Nehru Report 1928, Fourteen Points of Quaid-e-Azam 1929, Allama Iqbal's Allahabad Address 1930, Act of 1935 and Congress Ministries, Lahore Resolution 1940, Cripps Mission 1942, Simla Conference and Elections, Cabinet Mission Plan 1946, Direct Action Day, Interim Government, 3rd June 1947 Plan, Indian Independence Act 1947, Radcliffe Award, Dawn of Freedom
- 2.2 Role of Quaid-e-Azam Muhammad Ali Jinnah in the making of Pakistan with reference to his political and constitutional efforts
- 2.3 Consolidation of the State and making of Constitution, 1947-56
- 2.4 Early Problems:
Radcliffe Award, Settlement of Migrants, Administrative Problems, Economic Problems, Distribution of Military Assets, Dispute of River Water, Political Problems
- 2.5 Quaid-e-Azam Muhammad Ali Jinnah's Role and Achievements as First Governor General
- 2.6 Liaquat Ali Khan's Role and Achievements as First Prime Minister
- 2.7 Objectives Resolution:
Sovereignty of Allah Almighty, Follow the Islamic Value, Islamic Way of Life, Protection of Minorities, Provision of Fundamental Rights, Federal Form of Government, Safeguard the Interests of Backward and

- Depressed Classes, Independence of Judiciary, Importance of Objectives Resolution
- 2.8 Process of Constitution Making in Pakistan:
Salient features of the Constitution of 1956, Abrogation of Constitution
- 2.9 Accession of States and Tribal Areas to Pakistan:
State of Jammu and Kashmir, Hyderabad Deccan State, Junagarh State, Manavadar State, Swat State, Khairpur State and Bahawalpur State, Tribal Area
- 2.10 General Muhammad Ayub Khan Era, 1958-1969:
Lack of Political Leadership, Delay in Elections, Frequent Change in Governments, Constant Hurdles in making of Constitution
- 2.11 Basic Democracies System 1959:
Union Council /Town Committee, Tehsil Council /Thana Council, District Council, Divisional Council
- 2.12 Muslim Family Laws 1961:
Salient Feature of the Constitution of 1962, Failure of the Constitution 1962
- 2.13 Presidential Elections 1965:
Impact of Elections on Politics
- 2.14 Pakistan and India War 1965:
Main Events of War, Impact of War
- 2.15 Economic Development:
Focus on Agriculture Sector, Focus on Industrial Sector, Improvement in Education and Social Sector
- 2.16 General Yahya Khan Regime, 1969-71
- 2.17 Legal Framework Order 1970
- 2.18 General Elections of 1970
- 2.19 Separation of East Pakistan and Emergence of Bangladesh
- 2.20 Causes of Separation of East Pakistan:
Geographical Distance, Impact of Hindus on Trade and Services, Economic Backwardness, Role of Hindu Teachers, Language Issue, Problem of Representation Ratio, Indian Interference, Six points of Sheikh Mujeeb-ur- Rehman, General Elections of 1970

Chapter 3 : HISTORY OF PAKISTAN 1971 TILL DATE

- 3.1 Zulfikar Ali Bhutto's Era 1971-1977:
Industrial Reforms, Agricultural Reforms, Educational Reforms, Health Reforms, Economic Reforms, Social Reforms, Constitutional Reforms, Administrative Reforms
- 3.2 General Muhammad Zia-ul-Haq's Era 1977-1988:
Industrial, Reforms, Agricultural Reforms, Educational Reforms, Health Reforms, Economic Reforms, Social Reforms, Constitutional Reforms, Administrative Reforms
- 3.3 Benazir Bhutto's First Term 1988-90:
Industrial Reforms, Agricultural Reforms, Educational Reforms, Health Reforms, Economic Reforms, Social Reforms, Constitutional Reforms, Administrative Reforms
- 3.4 Benazir Bhutto's Second Term 1993-96:
Industrial Reforms, Agricultural Reforms, Educational Reforms, Health Reforms, Economic Reforms, Social Reforms, Administrative Reforms

- 3.5 Muhammad Nawaz Sharif's First Term 1990-93:
Industrial Reforms, Agricultural Reforms, Educational Reforms, Health Reforms, Economic Reforms, Social Reforms, Constitutional Reforms, Administrative Reforms
- 3.6 Muhammad Nawaz Sharif's Second Term 1997-99:
Economic Reforms and Privatization, Development of Modern Infrastructure, Nuclear Deterrence-Strengthening National Security, Constitutional and Political Reforms, Economic Development and Investment, Advancing Technology and Communication, Diplomatic Outreach and International Relations
- 3.7 Muhammad Nawaz Sharif's Third Term 2013-17:
Reforms in Energy Sector, China Pakistan Economic Corridor-CPEC, Health Card Scheme, Infrastructure Development, Economic Growth and Development, Law and Order, The National Endowment for Science and Technology-NEST
- 3.8 General Pervez Musharraf's Era 1999-2008:
Industrial Reforms, Agricultural Reforms, Educational Reforms, Health Reforms, Economic Reforms, Social Reforms, Constitutional Reforms, Administrative Reforms
- 3.9 Syed Yousaf Raza Gilliani's Era 2008-2012:
Industrial Reforms, Agricultural Reforms, Educational Reforms, Health Reforms, Economic Reforms, Social Reforms, Constitutional Reforms, Administrative Reforms
- 3.10 General Elections 2018:
Industrial Reforms, Agricultural Reforms, Educational Reforms, Health Reforms, Economic and Social Reforms, Administrative Reforms
- 3.11 Mian Muhammad Shahbaz Sharif First Term 2022-2023
- 3.12 Mian Muhammad Shahbaz Sharif Second Term 2024-Till Date
- 3.13 Constitution of Pakistan 1973
- 3.14 Pakistan as Nuclear Power

Chapter 4 : PAKISTAN AND WORLD AFFAIRS

- 4.1 Geo-political significance of Pakistan:
Trade Route, Land and Sea Routes, Good Relations with Different Countries, Tourism, Nuclear Power, Kashmir Issue, China Pakistan's Economic Corridor (CPEC)
- 4.2 Objectives of Pakistan's Foreign Policy:
Protection of Ideology of Pakistan, National Security, Promotion of Culture or Cultural Development, Economic Growth
- 4.3 Pakistan's Relations with the Neighbouring Countries India, Iran, Afghanistan, China
- 4.4 Kashmir Issue:
Genesis of Kashmir Issue, United Nation's intervention and its Declaration on Jammu & Kashmir, India's refusal to Hold Plebiscite, The arrival of the UN Envoy, Current Situation
- 4.5 Pakistan's Relations with Central Asian Countries
- 4.6 Organization of Islamic Cooperation (OIC) and Pakistan:
Pakistan's Relations with Saudi Arabia, Pakistan's Relations with Indonesia and Malaysia, Pakistan's Relations with Iran, Pakistan's Relations with Turkey, Pakistan's Relations with Libya, Egypt and

Syria, Pakistan's Relations with Palestine, Pakistan and other Muslim Countries

- 4.7 Pakistan's Relations with SAARC Countries:
Pakistan and India, Pakistan and Bangladesh, Pakistan and Sri Lanka, Pakistan and Nepal, Pakistan and Republic of Maldives, Pakistan and Bhutan, Pakistan and Afghanistan
- 4.8 Pakistan's Relations with major World Powers:
United States of America, Russia, Great Britain, Japan, European Union
- 4.9 China-Pakistan Economic Corridor (CPEC)
- 4.10 Pakistan's Contribution towards Peace Keeping in the World

Chapter 5 : LAND AND ENVIRONMENT

- 5.1 Location of Pakistan:
Importance of Location
- 5.2 Physical Features of Pakistan:
Mountain Ranges, Northern Mountain Ranges, North Western Mountain Range, Western Mountain Ranges, Plain Areas, Coastal Plains, Deserts, Plateaus, Pothowar Plateau, Balochistan Plateau
- 5.3 Climate of Pakistan:
Sub-Tropical Continental Highland, Sub-Tropical Continental Plateau, Sub-Tropical Continental Lowland, Tropical Coastalland
- 5.4 Impact of Climate on Human Life
- 5.5 Major Glaciers and Rivers of Pakistan:
Glacier, Siachen Glacier, Baltoro Glacier, Batora Glacier, Biafo Glacier, Hisper Glacier
- 5.6 Importance of glaciers
- 5.7 Rivers of Pakistan:
Indus River and its Tributaries, Indus River and its Eastern Tributaries, Ravi River, Sutlej River, Chenab River. Jhelum River, Indus River and its Western Tributaries, The Rivers of Balochistan falling into Arabian Sea
- 5.8 Canals of Pakistan:
Flood Canals, Perennial Canals, Non-Perennial Canals, Link Canals
- 5.9 Forests:
Importance of Forests, Wildlife in Pakistan
- 5.10 Natural Regions of Pakistan:
Plain Region, Desert Region, Coastal Region, Arid and Semi Arid Mountain Region, Semi Dry Mountain Region, Humid and Sub Humid Mountain Region
- 5.11 Major Environmental Hazards and their Remedies:
Pollution, Air Pollution, Water Pollution, Land Pollution, Deforestation, Desertification, Salinity and Water Logging
- 5.14 Problems Associated with the Conservation Strategies:
Water, Land, Vegetation, Wildlife

Chapter 6 : POPULATION, SOCIETY AND CULTURE OF PAKISTAN

- 6.1 Growth and Distribution of Population in Pakistan:
Population Growth Rate, Province Wise Density of Population, Rural Urban Composition and Distribution of Population

- 6.2 Gender Composition, Gender Discrimination and its Related Problems and their Solution
- 6.3 Salient Features of Pakistani Society and Culture:
Colours of Islamic Culture, Joint Family System, Customs and Traditions, Religious Harmony, Religious Festivals, Dress and Food, Mixed Culture, Urs and Fairs, Sports and Recreation, Protecting Rights of Minorities, Hospitality, Architecture and Painting, Poetry and Literature
- 6.4 Problems of Pakistani Society and Their Solution:
Poverty and Unemployment, Low Literacy Rate, Health Issues, Population Growth
- 6.5 Education Conditions in Pakistan:
ECCE, Primary and Elementary Education, Secondary and Higher Secondary Education, University Education
- 6.6 Educational Problems and their Solution:
Low Literacy Rate, Defective Examination System, Limited Resources for Education, Shortage of Teachers, Lack of Vocational and Technical Subjects in the Curriculum, Lack of Teaching Material, Lack of Basic Facilities, Lack of Co-curricular Activities, Selection of Wrong Combination of Subjects, Suggestions for Solving Educational Problems
- 6.7 Health Conditions in Pakistan:
Problems in the Health Sector
- 6.8 Importance of Tourism and Natural and Cultural Attraction for Tourism in Pakistan:
Introduction, Pakistan's Tourist Destinations, Tourist Places Full of Natural Scenery, Religious Tourist Places, Important Historical Places in Terms of Tourism, International Views on Pakistan's Tourism Sector, Performance of Pakistan's Tourism Sector, Measures Taken by the Government of Promote Tourism, Responsibilities of Pakistani People for the promotion of Tourism
- 6.9 Need and Importance of Interfaith Harmony, Tolerance and Resilience against Terrorism
- 6.10 Commonality in Regional Cultures Leading to Two National Integration and Cohesion
- 6.11 Origin and Evolution of National and Regional Languages:
Urdu Language
- 6.12 Regional Languages:
Punjabi Language, Sindhi Language, Pashto Language, Balochi Language, Kashmiri Language, Saraiki Language, Shina, Balti, Wakhi and Burushaski Languages, Brahui Language, Pahari or Hindko Language, Gojri Language
- 6.13 Causes, Consequences and Remedies for Poverty Alleviation in Pakistan
- 6.14 Contribution and Achievements of Minorities in Nation Building

Chapter 7 ECONOMIC DEVELOPMENT OF PAKISTAN

- 7.1 Economics Developments of Pakistan
- 7.2 Economic Development in Pakistan through Decades:
First Decade: From Establishment of Pakistan to 1958, Second Decade: From 1958 to 1968, Third Decade: From 1968 to 1978, Fourth

- Decade: From 1978 to 1988, Fifth Decade: From 1988 to 1998, Sixth Decade: From 1998 to 2008, Seventh Decade: From 2008 to 2018
- 7.3 Labour Force
- 7.4 Major Metallic and Non-metallic Mineral Resources of Pakistan their Economic Importance and Distribution in Pakistan:
Metallic Minerals, Iron, Copper and Gold, Manganese, Bauxite, Chromite
Non-metallic Minerals: Coal, Gypsum, Rock Salt, Marble, Lime Stone, Sulphur, China Clay
- 7.5 Importance of Agriculture, Problems and Efforts to Modernize Agriculture
- 7.6 Problems of Agriculture:
Modernisation in Agriculture
- 7.7 Water Resources of Pakistan and Existing Irrigation System:
Rainfall, Canals, tubewell, Karez, Indust Water Treaty
- 7.8 Barrages and Canals on River Indus and its Eastern Tributaries:
Barrages and Canals on River Indus (Jinnah Barrage, Chashma Barrage, Tounsa Barrage, Guddu Barrage, Sukkur Barrage, Kotri Barrage) - Dam, Barrages and Canals on River Jhelum (Mangla Dam, Rasul Barrage) - Barrages and Canals on River Chenab (Marala Barrage, Khanki Barrage, Qadirabad Barrage) - Barrages and Canals on Combined River Chenab and Jhelum (Trimmu Barrage) - Barrages and Canals on River Ravi (Balloki Barrage, Sidhnai Barrage) - Barrages and Canals on River Sutlej (Sulemanki Barrage, Islam Barrage) - Dam, Barrages and Canals on Kyber Pakhtunkhwa (Warsak Dam, Khanpur Dam, Tanda and Changhoz Dam) - Dam, Barrages and Canals of Balochistan (Hub Dam, Mirani Dam) - Dam, Rivers and Canals of Gilgit Baltistan.
- 7.9 Production, Distribution of Major Crops, Livestock and Fisheries in Pakistan:
Major Crops of Pakistan (Wheat, Rice, Cotton, Sugarcane, Maize) – Livestock, Poultry, Fisheries
- 7.10 Importance of Industries, their Location and Production of Cottage, Small and Large – scale Industries:
Cottage Industry, Small Industry, Problems of Small Industry, Large Scale Industries
- 7.11 Importance, Production and Consumption of Different Sources of Energy in Pakistan:
Electricity, Suggestion of Solve Electricity Problem, Gas, Mineral Oil, Coal
- 7.12 International Trade of Paksitan (Imports and Exports) and its Impact on the Economy:
Major Imports of Pakistan, Major Exports of Pakistan, Trade Deficit, Measures to Reduce Trade Deficit
- 7.13 Importance of Sea Ports and Dry Ports of Pakistan:
Sea Ports of Pakistan (Karachi Port, Muhammad Bin Qasim Port, Gawadar Port) – Dry Ports of Pakistan

Chapter 8 : WOMEN EMPOWERMENT

- 8.1 Women's Rights in Islam in the light of Quran and Sunnah
- 8.2 Women's Role in Pakistan Movement

- 8.3 Women's Contribution in National Development from 1947 Till Now
- 8.4 Definition of Violence and Violence against Women
- 8.5 Violence Impacts upon Pakistan's Society with Reference to Constitutional Provisions:
Common Ideas about Violence Against Women
- 8.5 Government's efforts to address the issue of Violence against Women in Pakistan:
Punjab Marriage Restraint Act, 2015
Punjab Protection of Women against Violence Act, 2016
- 8.6 Government's Efforts regarding Women's Protection and Women's Empowerment

Prescribed Book: **Pakistan Studies for Part – II (Class –X)**

Authors: Dr. Ali Iqtedar Mirza, Syed Abbas Haider, Muhammad Hussain Chaudhary, Al-Haaj Prof. Muhammad Rasheed, Prof. Anjum James Paul

Prepared by: Punjab Curriculum and TextBook Board, Lahore

Publisher: Rehan Publications, Lahore

Printed by: Al-Raheem Art Press, Lahore.



تَرْجَمَةُ الْقُرْآنِ الْمَجِيدِ

وقت: 02:00 گھنٹے	پارٹ-I (جماعت نہم)	کل نمبر: 50
------------------	--------------------	-------------

فہرستِ عنوانات

1-	تلاوتِ قرآن مجید کے آداب	2-	عمومی ہدایات برائے اساتذہ کرام
3-	حاصلاتِ تعلّم	4-	سُورَةُ مَرْيَمَ
5-	سُورَةُ طه	6-	سُورَةُ الْاَنْبِيَاءِ
7-	سُورَةُ الْحَجِّ	8-	سُورَةُ الْفُرْقَانِ
9-	سُورَةُ الشُّعَرَاءِ	10-	سُورَةُ النَّبْلِ
11-	سُورَةُ الْعَنْكَبُوتِ	12-	سُورَةُ الرُّومِ
13-	سُورَةُ السَّجْدَةِ	14-	سُورَةُ الْقُلُوبِ
15-	سُورَةُ يٰسَ	16-	سُورَةُ سَبَا
17-	سُورَةُ الْاَحْكَافِ	18-	سُورَةُ الصَّفٰتِ
19-	سُورَةُ الْاَحْكَافِ	20-	سُورَةُ ص
21-	رموزِ اوقافِ قرآن مجید	22-	ماڈل پیپر برائے جماعت نہم
23-	سرٹیفکیٹ	24-	تصدیقی سرٹیفکیٹ

وقت: 02:00 گھنٹے	پارٹ-II (جماعت دہم)	کل نمبر: 50
------------------	---------------------	-------------

فہرستِ عنوانات

1-	تلاوتِ قرآن مجید کے آداب	2-	عمومی ہدایات
3-	حاصلاتِ تعلّم	4-	سُورَةُ الْاَنْعَامِ
5-	سُورَةُ يُؤُسَ	6-	سُورَةُ الرُّدِّ
7-	سُورَةُ اِبْرٰهِيْمَ	8-	سُورَةُ النَّحْلِ
9-	سُورَةُ بَنِي اِسْرٰءِيْلَ	10-	سُورَةُ الْكَهْفِ
11-	سُورَةُ الزُّمَرِ	12-	سُورَةُ الْبُؤْمِنِ (الْعَافِي)
13-	سُورَةُ الشُّوَرٰى	14-	سُورَةُ حَمَّ السَّجْدَةِ (فُصِّلَتْ)
15-	سرٹیفکیٹ	16-	ماڈل پیپر
17-		18-	رموزِ اوقاف
19-		20-	
21-		22-	

درسی کتب کا نام:	تَرْجَمَةُ الْقُرْآنِ الْمَجِيدِ (برائے جماعت نہم)	تَرْجَمَةُ الْقُرْآنِ الْمَجِيدِ (برائے جماعت دہم)
مصنفین:	ڈاکٹر سعید احمد سعیدی ، حافظ غلام یاسین	ڈاکٹر فخر الزمان ، محمد صفدر جاوید
تیار کردہ:	علی برادران پبلشرز اینڈ پرنٹرز، لاہور	پنجاب کریکولم اینڈ ٹیکسٹ بک بورڈ، لاہور



PHYSICS

Part – I	60 Marks
Part – II	60 Marks
Practical	30 Marks
Total	150 Marks

Part-I (Class-IX)	Marks: 60	Time: 2:00 Hours
--------------------------	------------------	-------------------------

UNIT-1 : PHYSICAL QUANTITIES AND MEASUREMENT

- 1.1 Physical and Non-Physical Quantities
- 1.2 Base and Derived Physical Quantities
- 1.3 International System of Units
- 1.4 Scientific Notation
- 1.5 Length Measuring Instruments
- 1.6 Mass Measuring Instruments
- 1.7 Time Measuring Instruments
- 1.8 Volume Measuring Instruments
- 1.9 Errors in Measurements
- 1.10 Uncertainty in a Measurement
- 1.11 Significant Figures
- 1.12 Precision and Accuracy
- 1.13 Rounding off the Digits

UNIT-2 : KINEMATICS

- 2.1 Scalars and Vectors
- 2.2 Rest and Motion
- 2.3 Types of Motion
- 2.4 Distance and Displacement
- 2.5 Speed of Velocity
- 2.6 Acceleration
- 2.7 Graphical Analysis of Motion
- 2.8 Gradient of a Distance-Time Graph
- 2.9 Speed-Time Graph
- 2.10 Gradient of a Speed-Time Graph
- 2.11 Area Under Speed-Time Graph
- 2.12 Solving Problems for Motion Under Gravity
- 2.13 Free Fall Acceleration

Unit-3 : DYNAMICS

- 3.1 Concept of Force
- 3.2 Fundamental Forces
- 3.3 Forces in a Free-Body Diagram
- 3.4 Newton's Laws of Motion
- 3.5 Limitations of Newton's Laws of Motion
- 3.6 Mass and Weight
- 3.7 Mechanical and Electronic Balances
- 3.8 Friction
- 3.9 Momentum and Impulse
- 3.10 Principle of Conservation of Momentum

Unit-4 : TURNING EFFECT OF FORCE

- 4.1 Like and Unlike Parallel Forces
- 4.2 Addition of Forces
- 4.3 Turning Effect of a Force
- 4.4 Resolution of Vectors
- 4.5 Determination of a Force from its Perpendicular Components
- 4.6 Principle of Moments
- 4.7 Centre of Gravity and Centre of Mass
- 4.8 Equilibrium
- 4.9 Conditions of Equilibrium

- 4.10 States of Equilibrium
- 4.11 Improvement of Stability
- 4.12 Application of Stability in Real Life
- 4.13 Centripetal Force

Unit-5 : WORK, ENERGY AND POWER

- 5.1 Work
- 5.2 Energy
- 5.3 Conservation of Energy
- 5.4 Sources of Energy
- 5.5 Renewable and Non-Renewable Sources
- 5.6 The Advantages and Disadvantages of Methods of Energy Production
- 5.7 Power
- 5.8 Efficiency

Unit-6 : MECHANICAL PROPERTIES OF MATTER

- 6.1 Deformation of Solids
- 6.2 Hooke's Law
- 6.3 Density
- 6.4 Pressure
- 6.5 Pressure in Liquids
- 6.6 Atmospheric Pressure
- 6.7 Measurement of Atmospheric Pressure
- 6.8 Measurement of Pressure by Manometer
- 6.9 Pascal's Law

Unit-7 : THERMAL PROPERTIES OF MATTER

- 7.1 Kinetic Molecular Theory of Matter
- 7.2 Temperature and Heat
- 7.3 Thermometers
- 7.4 Sensitivity, Range and Linearity of Thermometers
- 7.5 Structure of a Liquid-in-Glass Thermometer

Unit-8 : MAGNETISM

- 8.1 Magnetic Materials
- 8.2 Properties of Magnets
- 8.3 Induced Magnetism
- 8.4 Temporary and Permanent Magnets
- 8.5 Magnetic Fields
- 8.6 Uses of Permanent Magnets
- 8.7 Electromagnets
- 8.8 Domain Theory of Magnetism
- 8.9 Magnetisation and Demagnetisation
- 8.10 Applications of Magnets in Recording Technology
- 8.11 Soft Iron as Magnetic Shield

Unit-9 : NATURE OF SCIENCE

- 9.1 Scope of Physics
- 9.2 Branches of Physics
- 9.3 Interdisciplinary Nature of Physics
- 9.4 Interdisciplinary Research
- 9.5 Scientific Methods
- 9.6 Scientific Base of Technologies and Engineering

Prescribed Book: Physics for Part – I (Class –IX)

Authors: Professor (Rtd.) Muhammad Nisar

Published by: Punjab Book Depot Lahore

Printed by: Ishaq Al Fateh Printers

For: Punjab Curriculum and TextBook Board, Lahore

Part-II (Class-X)	Marks: 60	Time: 2:00 Hours
Unit-10 :	SIMPLE HARMONIC MOTION AND WAVES	
10.1	Simple Harmonic Motion	
	10.1.1 Motion of Mass Attached to a Spring	
	10.1.2 Ball and Bowl System	
	10.1.3 Motion of a Simple Pendulum	
10.2	Damped Oscillations	
10.3	Wave Motion	
10.4	Types of Mechanical Waves	
10.5	Waves As Carriers of Energy	
10.6	Ripple Tank	
Unit-11 :	SOUND	
11.1	Sound Waves	
11.2	Characteristics of Sound	
11.3	Reflection of Sound	
11.4	Speed of Sound	
11.5	Noise Pollution	
11.6	Audible Frequency Range	
11.7	Ultrasound	
Unit-12 :	GEOMETRICAL OPTICS	
12.1	Reflection of Light	
	12.1.1 Laws of Reflection	
	12.1.2 Types of Reflection	
12.2	Spherical Mirrors	
12.3	Image Location by Spherical Mirror Formula	
12.4	Refraction of Light	
12.5	Total Internal Reflection	
12.6	Refraction Through Prism	
12.7	Lenses	
12.8	Refraction Through Lenses	
12.9	Formation of Image by Lens Equation	
12.10	Applications of Lenses	
12.11	Simple Microscope	
12.12	Compound Microscope	
12.13	Telescope	
12.14	The Human Eye	
12.15	Defects of Vision	
Unit-13 :	ELECTROSTATICS	
13.1	Production of Electric Charges	
13.2	Electrostatic Induction	
13.3	Electroscope	
13.4	Coulomb's Law	
13.5	Electric Field and Electric Field Intensity	
13.6	Electrostatic Potential	
13.7	Capacitors and Capacitance	
13.8	Different Types of Capacitors	
13.9	Applications of Electrostatics	
13.10	Some Hazards of Static Electricity	
Unit-14 :	CURRENT ELECTRICITY	
14.1	Electric Current	
14.2	Potential Difference	
14.3	Electromotive Force (e.m.f)	
14.4	Ohm's Law	
14.5	V-I Characteristics of Ohmic and Non Ohmic Conductors	
14.6	Specific Resistance (Resistivity)	

- 14.7 Conductors
- 14.8 Insulators
- 14.9 Combination of Resistors
- 14.10 Electrical Energy and Joule's Law
- 14.11 Electric Power
- 14.12 Direct Current and Alternating Current
- 14.13 Hazards of Electricity
- 14.14 Safe Use of Electricity in Homes

Unit-15 : ELECTROMAGNETISM

- 15.1 Magnetic Effects of a Steady Current
- 15.2 Force on a Current – Carrying Conductor Placed in a Magnetic field
- 15.3 Turning Effect on a Current-Carrying Coil in a Magnetic Field
- 15.4 D.C. Motor
- 15.5 Electromagnetic Induction
- 15.6 Direction of Induced e.m.f. – Lenz's Law
- 15.7 A.C. Generator
- 15.8 Mutual Induction
- 15.9 Transformer
- 15.10 High Voltage Transmission

Unit-16 : BASIC ELECTRONICS

- 16.1 Thermionic Emission
- 16.2 Investigating the Properties of Electrons
- 16.3 Cathode-Ray Oscilloscope (C.R.O)
- 16.4 Analogue and Digital Electronics
- 16.5 Basic Operations of Digital Electronics-Logic Gates
- 16.6 AND Operation
- 16.7 OR Operation
- 16.8 NOT Operation
- 16.9 NAND Gate
- 16.10 NOR Gate
- 16.11 Uses of Logic Gates

Unit-17 : INFORMATION AND COMMUNICATION TECHNOLOGY

- 17.1 Information and Communication Technology
- 17.2 Components of Computer Based Information System (CBIS)
- 17.3 Flow of Information
- 17.4 Transmission of Electrical Signal Through Wires
- 17.5 Transmissions of Radio waves Through Space
- 17.6 Transmission of Light Signals Through Optical Fibers
- 17.7 Information Storage Devices
 - Primary Memory
 - Audio and Video Cassettes
 - Hard Disk
 - Flash Drive
 - Data Management
 - Browsers
 - Electronic Mail
 - Secondary Storage Devices
 - Magnetic Disks
 - Compact Disc (CDs)
 - Application of Computer
 - Internet Services
 - How to Search the Web

Unit-18 : ATOMIC AND NUCLEAR PHYSICS

- 18.1 Atom and Atomic Nucleus
- 18.2 Natural Radioactivity
- 18.3 Background Radiations
- 18.4 Nuclear Transmutations
- 18.5 Half-Life and Its Measurement
- 18.6 Radioisotopes and their Uses

- 18.7 Fission Reaction
- 18.8 Nuclear Fusion
- 18.9 Hazards of Radiation and Safety Measures

LIST OF PRACTICALS FOR CLASS-IX (PART-I)

1. Measure the area of cross-section of a solid cylinder by measuring its diameter with Vernier calipers.
2. Determine the volume of a solid cylinder by measuring its length and diameter.
3. Measure the thickness of a metal strip or a wire by using a screw gauge.
4. Find the acceleration of a ball rolling down an inclined angle iron by drawing a graph between $2S$ and t^2 .
5. Find the value of 'g' by free fall method.
6. Investigate the relation between force of limiting friction and normal reaction to find the co-efficient of sliding friction between a wooden block and horizontal surface.
7. Find the force of limiting friction by rolling a roller on a horizontal surface.
8. Determine the value of 'g' by Atwood's machine.
9. Determine the resultant of two forces graphically by using a Horizontal force table.
10. Find the unknown weight of an object by using vector addition of forces.
11. Verify the principle of moments by using a metre rod balanced on a wedge.
12. Find the unknown weight of an object by using principle of moments.
13. Find the tension in the strings by balancing a metre rod on the stands.
14. Study the effect of length of simple pendulum on its time period and hence, find the value of 'g' by calculation.
15. Prove that time period of a simple pendulum is independent of mass of the pendulum.
16. Prove that time period of a simple pendulum is independent of amplitude of vibration.
17. Determine the relationship between load and extension (Helical spring) by drawing a graph.
18. Find the density of a body heavier than water by Archimedes principle.
19. Find the density of a liquid using a disposable syringe.
20. Find the specific heat of a given solid by the method of mixture using polystyrene cup.
21. Draw a graph between temperature and time when ice is converted into water and then to steam by slow heating.
22. Find the latent heat of fusion of ice.

LIST OF PRACTICALS FOR CLASS-X (PART-II)

1. Verify the laws of refraction by using a glass slab.
2. Find the refractive index of water by using concave mirror.
3. Determine the critical angle of glass using a semi-circular glass slab and a light ray box or by prism.
4. Trace the path of a ray of light through a glass prism and measure the angle of deviation.
5. Find the focal length of a convex lens by parallax method.
6. Set up a microscope.
7. Set up a telescope.
8. Verify Ohm's law (using wire as conductor).
9. Study resistors in series circuit.
10. Study resistors in parallel circuit.
11. Find the resistance of galvanometer by half deflection method.
12. Trace the magnetic field using a bar magnet.
13. Trace the magnetic field due to a current carrying circular coil.
14. Verify the truth table of OR, AND, NOT, NOR and NAND gates.
15. Set up a NAND gate burglar Alarm.
16. Set up a NOT gate Fire Alarm.

Prescribed Book: Physics for Part – II (Class –X)

Authors: Dr. Azmat Iqbal , Dr. Ghulam Murtaza

Published by: Malik Siraj-ud-Din & Sons Lower Mall, Lahore

For: Punjab Curriculum and TextBook Board, Lahore



CHEMISTRY

Part – I	60 Marks
Part – II	60 Marks
Practical	30 Marks
Total	150 Marks

Part-I (Class-IX)	Marks: 60	Time: 2:00 Hours
--------------------------	------------------	-------------------------

Chapter-1 : STATES OF MATTER AND PHASE CHANGES

- 1.1 What is Chemistry?
- 1.2 States of Matter
- 1.3 Element, Compound and Mixture
- 1.4 Allotropic Forms of Substances
- 1.5 Differences Between Elements, Compounds and Mixtures
- 1.6 Solution, Colloidal Solution and Suspension
- 1.7 Formation of Unsaturated and Saturated Solutions
- 1.8 Effect of Temperature on the Solubility of Solutes

Chapter-2 : ATOMIC STRUCTURE

- 2.1 Structure of Atom
- 2.2 Atomic Number and Mass Numbers
- 2.3 Isotopes and their Masses
- 2.4 Relative Atomic Mass

Chapter-3 : CHEMICAL BONDING

- 3.1 Why do Atoms form Chemical Bonds?
- 3.2 Chemical Bond
- 3.3 Metallic Bond
- 3.4 Electropositive Character of Metals
- 3.5 Electronegative Character of Non-Metals
- 3.6 Compare the Properties of Ionic and Covalent Compounds
- 3.7 Intermolecular Forces of Attraction
- 3.8 Nature of Bonding and Properties

Chapter-4 : STOICHIOMETRY

- 4.1 Chemical Formula
- 4.2 Empirical Formula
- 4.3 Chemical Formulas of Binary Ionic Compounds
- 4.4 Chemical Formulas of Compounds
- 4.5 Deduce the Molecular Formula from the Structural Formula
- 4.6 Avogadro's Number (N_A)
- 4.7 The Mole and Molar Mass
- 4.8 Chemical Equations and Chemical Reactions
- 4.9 Calculations Based on Chemical Equation

Chapter-5 : ENERGETICS

- 5.1 System and Surrounding
- 5.2 Enthalpy
- 5.3 Exothermic and Endothermic Reactions
- 5.4 How does a Reaction Take Place?
- 5.5 Aerobic and Anaerobic Respiration

Chapter-6 : EQUILIBRIA

- 6.1 Reversible and Irreversible Changes
- 6.2 Dynamic Equilibrium
- 6.3 Changing the Physical Conditions of a Chemical Reaction

Chapter-7 : ACID BASE CHEMISTRY

- 7.1 Acid and Bases
- 7.2 Different Concepts of Acids and Bases

-
- 7.3 Bronsted – Lowry concepts of Acids and Bases
7.4 Properties of Acids and Bases
7.5 Acid Rain and its Effects
- Chapter-8 : PERIODIC TABLE AND PERIODICITY**
8.1 Modern Periodic Table
8.2 Salient Features of Modern Periodic Table
8.3 Similarities in the Chemical Properties of Elements in the Same Group
8.4 Variation of Periodic Properties in Periods and Groups
8.5 Metallic Character and Reactivity
- Chapter-9 : GROUP PROPERTIES AND ELEMENTS**
9.1 Properties of Group 1 Elements
9.2 Properties of Group 17 Elements
9.3 Group Properties of Transition Elements
9.4 Properties of Noble Gases
9.5 Physical Properties of Metals and Non-Metals
- Chapter-10 : ENVIRONMENTAL CHEMISTRY**
Introduction
10.1 Composition of Atmosphere
10.2 Air Pollutants
10.3 Acid Rain
10.4 Global Warming (Greenhouse Effect)
10.5 Strategies to Reduce Environmental Issues
- Chapter-11 : HYDROCARBONS**
Introduction
11.1 Hydrocarbons
11.2 Alkanes
11.3 Preparation of Alkanes
11.4 Important Reactions
- Chapter-12 : EMPIRICAL DATA COLLECTION AND ANALYSIS**
Introduction
12.1 SI Units of Chemistry
12.2 Tools and Techniques to Manage Accuracy and Precision
12.3 Accuracy and Precision
- Chapter-13 : LABORATORY AND PRACTICAL SKILLS**
Introduction
13.1 Chemical Hazards in the Laboratory
13.2 Hazard Signs
13.3 Personal Protective Equipment (PPE) in the Laboratory
13.4 Location of Fire Extinguisher
13.5 Emergency Situation in the Lab
- Prescribed Book: Chemistry for Part – I (Class –IX)**
Author: Prof. Dr. Abid Zia (Phd Organic Chemistry)
University of East Anglia Norwich, United Kingdom
Prepared by: Ahsan Publishers, Lahore
Published by: Mehtab & Company
Printer by: Naved Hafeez Press
For: Punjab Curriculum and TextBook Board, Lahore
-

Part-II (Class-X)	Marks: 60	Time: 2:00 Hours
Unit-9 :	CHEMICAL EQUILIBRIUM	
9.1	Reversible Reaction and Dynamic Equilibrium	
9.2	Law of Mass Action	
9.3	Equilibrium Constant and its Units	
9.4	Importance of Equilibrium Constant	
Unit-10 :	ACIDS, BASES AND SALTS	
10.1	Concepts of Acids and Bases	
	10.1.1 Arrhenius Concept of Acids and Bases	
	10.1.2 Limitation of Arrhenius Concept	
	10.1.3 Lewis Concept of Acids and Bases	
	10.1.4 General Properties of Acids	
	10.1.5 General Properties of Bases	
10.2	pH Scale	
10.3	Salts	
	10.3.1 Preparation	10.3.2 Types of Salts
	10.3.3 Uses of Salts	
Unit-11 :	ORGANIC CHEMISTRY	
11.1	Organic Compounds	
	11.1.1 Classification of Organic Compounds	
	11.1.2 Diversity and Magnitude of Organic Compounds	
	11.1.3 General Characteristics of Organic Compounds	
11.2	Sources of Organic Compounds	
	11.2.1 Coal	11.2.2 Petroleum
	11.2.3 Natural Gas	11.2.4 Plants
	11.2.5 Synthesis in Laboratory	
11.3	Uses of Organic Compounds	
11.4	Alkenes and Alky Radicals	
11.5	Functional Groups	
	11.5.1 Functional Groups depend on Carbon, Hydrogen and Oxygen	
	11.5.2 Functional Groups depend on Carbon, Hydrogen and Nitrogen	
	11.5.3 Functional Groups depends on Carbon, Hydrogen and Halogen	
	11.5.4 Double and Triple Bond	
11.6	Tests of functional groups	
	11.6.1 Test for unsaturation	11.6.2 Test for Alcoholic group
	11.6.3 Test for Carboxylic group	11.6.4 Test for Aldehydic group
	11.6.5 Test for Ketonic group	11.6.6 Test for Primary Amino group
	11.6.7 Test for ester	
Unit-12 :	HYDROCARBONS	
12.1	Alkanes	
	12.1.1 Preparation of Alkenes	
	(Hydrogenation of alkenes and alkynes, Reduction of alkyl halides)	
	12.1.2 Chemical reactions (Halogenation, Combustion)	
12.2	Alkenes	
	12.2.1 Preparation of Alkenes	
	(Dehydration of Alcohols, Dehydrohalogenation of alkyl halides)	
	12.2.2 Chemical reactions	
	(Hydrogenation of alkenes, Halogenation of alkenes, Hydro	
	Halogenation of Alkenes, Oxidation of alkenes with KMnO_4)	
12.3	Alkynes	
	12.3.1 Preparation of Alkynes (Dehydro Halogenation of vicinal dihalides,	
	Dehalogenation of terahalides)	
	12.3.2 Chemical Reactions (Addition of halogen, Oxidation with KMnO_4)	

Unit-13 : BIOCHEMISTRY

- 13.1 Carbohydrates
 - 13.1.1 Monosaccharides
 - 13.1.2 Oligosaccharides
 - 13.1.3 Polysaccharides
 - 13.1.4 Sources and uses of carbohydrates
- 13.2 Protein
 - 13.2.1 Amino Acids are building blocks of proteins
 - 13.2.2 Sources and uses of proteins
- 13.3 Lipids
 - 13.3.1 Fatty acids
 - 13.3.2 Sources and uses of lipids
- 13.4 Nucleic Acids
 - 13.4.1 Deoxyribonucleic acid (DNA)
 - 13.4.2 Ribonucleic acid RNA
- 13.5 Vitamins
 - 13.5.1 Types of Vitamins (Fat soluble vitamins, Water soluble vitamins)
 - 13.5.2 Importance of vitamins

Unit-14 : THE ATMOSPHERE

- 14.1 Composition of Atmosphere
- 14.2 Layers of Atmosphere
 - 14.2.1 Troposphere
 - 14.2.2 Stratosphere
- 14.3 Pollutants
 - 14.3.1 Types of pollutants
 - 14.3.2 Sources of air pollutants
- 14.4 Acid Rain and its Effects
- 14.5 Ozone Depletion and its Effects

Unit-15 : WATER

- 15.1 Properties of Water
- 15.2 Water as Solvent
- 15.3 Soft and Hard Water
 - 15.3.1 Types of Hardness of Water
 - 15.3.2 Methods of Removing Hardness
- 15.4 Water Pollution
 - 15.4.1 Industrial effluents
 - 15.4.2 Domestic effluents
 - 15.4.3 Agricultural effluents
- 15.5 Waterborne infectious diseases (Dysentery, Cholera, Cryptosporidium, Fluorosis, Hepatitis, Hookworm, Jaundice, Typhoid)

Unit-16 : CHEMICAL INDUSTRIES

- 16.1 Basic Metallurgical Operations
- 16.2 Manufacture of Sodium Carbonate by Solvay's Process
 - 16.2.1 Materials
 - 16.2.2 Basic reactions
- 16.3 Manufacture of Urea
 - 16.3.1 Raw materials
 - 16.3.2 Process
- 16.4 Petroleum Industry
 - 16.4.1 Petroleum
 - 16.4.2 Origin of Petroleum
 - 16.4.3 Important fractions of Petroleum

LIST OF PRACTICALS FOR CLASS-IX (PART-I)

1. Separate the given mixture of iron fillings and sand by physical method.
2. Determine the melting point of given compounds Naphthalene.
3. Determine the melting point of given compounds Biphenyl.
4. Determine the boiling point of given liquids (Acetone).
5. Determine the boiling point of given liquids (Toluene).
6. Determine the boiling point of given liquids (Ethyl alcohol).
7. Demonstrate sublimation using ammonium chloride.
8. Separate naphthalene from given mixture of sand and naphthalene by sublimation.
9. Separate the given mixture of alcohol and water by distillation.

10. Demonstrate that a chemical reaction releases energy in the form of heat.
11. Prepare 100cm³ of 0.1M sodium hydroxide (NaOH solution).
12. Prepare 100cm³ of 0.1M sodium carbonate (Na₂CO₃ solution).
13. Prepare 250cm³ of 0.1M HCl solution.
14. Prepare 250cm³ of 0.1M oxalic acid (H₂C₂O₄.2H₂O solution).
15. Prepare 100cm³ of 0.1M sodium hydroxide (NaOH solution from the given 1M solution).
16. Prepare 100cm³ of 0.01M Na₂CO₃ solution from the given 0.1 M solution.
17. Prepare 100cm³ of 0.01M hydrochloric acid (HCl solution from the given 0.1M solution).
18. Prepare 100cm³ of 0.01M oxalic acid solution from the given 0.1M solution.
19. Prepare pure copper sulphate crystals from the given impure sample.
20. Demonstrate that miscible liquids dissolve in each other and immiscible liquids do not.
21. Demonstrate that temperature affects the solubility.
22. Demonstrate the conductivity of different given solution.
23. Demonstrate a metal displacement reaction in aqueous medium.
24. Demonstrate that two elements combine to form a binary compound.
25. Demonstrate that compounds can be products of a decomposition reaction.
26. Demonstrate that some processes absorb energy.

LIST OF PRACTICALS FOR CLASS-X (PART-II)

1. Identify sodium, calcium, strontium, barium, copper and potassium ions by flame test.
2. Standardize the given NaOH solution volumetrically.
3. Standardize the given HCl solution volumetrically.
4. Determine the exact molarity of the Na₂CO₃ solution volumetrically.
5. Determine the exact molarity of a solution of oxalic acid volumetrically.
6. Demonstrate that some natural substances are weak acids.
7. Classify substances as acidic, basic or neutral.
8. Identify aldehydes using Fehling's test and Tollen's test.
9. Identify ketones using 2,4-dinitrophenyl hydrazine test.
10. Identify carboxylic acids using sodium carbonate test.
11. Identify phenol using Ferric Chloride test.
12. Identify saturated and unsaturated organic compounds by KMnO₄ test.
13. Demonstrate that sugar decomposes into elements and other compounds.
14. Demonstrate the softening of water by removal of calcium and magnesium ions from hard water.

Prescribed Book: Chemistry for Part – II (Class – X)

Authors: Dr. Jalil Tariq , Dr. Irshad Ahmad Chatha

Published by: The Carvan Book House, Lahore

For: Punjab Curriculum and TextBook Board, Lahore



BIOLOGY

Part – I	60 Marks
Part – II	60 Marks
Practical	30 Marks
Total	150 Marks

Part-I (Class-IX)	Marks: 60	Time: 2:00 Hours
--------------------------	------------------	-------------------------

Chapter 1 : The Science of Biology

- 1.1 Biology and its Branches
- 1.2 Relation of Biology with Other Sciences
- 1.3 Careers in Biology
- 1.4 Quranic Instructions to Reveal the Study of Life
- 1.5 Science as a Collaborative Field
- 1.6 Scientific Method
- 1.7 Theory and Law/Principle
- 1.8 Malaria – An Example of Biological Method

Chapter 2 : Biodiversity

- 2.1 Biodiversity
- 2.2 Classification
- 2.3 Taxonomic Ranks
- 2.4 History of Classification
- 2.5 Domains of Living Organisms
- 2.6 Classification of Domain Eukarya
- 2.7 Status of Virus in Classification
- 2.8 Binomial Nomenclature

Chapter 3 : The Cell

- 3.1 Cell
- 3.2 Structure of Cell
- 3.3 Structural Advantages of Plant and Animal Cells
- 3.4 Cell Specialization
- 3.5 Stem Cells

Chapter 4 : Cell Cycle

- 4.1 Cell Cycle
- 4.2 Mitosis
- 4.3 Meiosis
- 4.4 Comparison between Meiosis and Mitosis

Chapter 5 : Tissues, Organs and Organ Systems

- 5.1 Levels of Organization
- 5.2 Organs and Organ Systems in Plants
- 5.3 Organs and Organ Systems in Humans
- 5.4 Homeostasis

Chapter 6 : Biomolecules

- 6.1 Biomolecules
- 6.2 Carbohydrates
- 6.3 Proteins
- 6.4 Lipids
- 6.5 Nucleic Acids
- 6.6 The Working of DNA and RNA

Chapter 7 : Enzymes

- 7.1 Metabolism
- 7.2 Enzymes

- 7.3 Mechanism of Enzyme Action
- 7.4 Factors that Affect the Activity of Enzymes
- 7.5 Enzyme Inhibition

Chapter 8 : Bioenergetics

- 8.1 ATP : The Cell's Energy Currency
- 8.2 Photosynthesis
- 8.3 Cellular Respiration

Chapter 9 : Plant Physiology

- 9.1 Nutrition in Plants
- 9.2 Transport in Plants
- 9.3 Transpiration
- 9.4 Transport of Water and Salts in Plants
- 9.5 Translocation of Food in Plants
- 9.6 Gaseous Exchange in Plants
- 9.7 Mechanisms for Excretion in Plants
- 9.8 Osmotic Adjustments in Plants

Chapter 10 : Reproduction in Plants

- 10.1 Types of Asexual Reproduction
- 10.2 Artificial Propagation
- 10.3 Sexual Reproduction in Plants

Chapter 11 : Biostatistics

- 11.1 Introduction of Biostatistics
- 11.2 Mean, Median and Mode
- 11.3 Bar Chart

Prescribed Book: **Biology for Part – I (Class –IX) (9th)**

Authors: Dr. Raheela Nadeem, Dr. Robeela Shabbir,
Dr. Adnan Ahmad Rana, Mr. Zunnorain Ahmed,
Muhammad Naveed Asghar

Published by: Zarqa Publishers

For: Punjab Curriculum and TextBook Board, Lahore

Printed by: Nasab Printers

Part-II (Class-X)	Marks: 60	Time: 2:00 Hours
--------------------------	------------------	-------------------------

SECTION: 3
LIFE PROCESSES

Unit-10 : GASEOUS EXCHANGE

- 10.1 Gaseous Exchange in Plants
- 10.2 Gaseous Exchange in Humans
 - 10.2.1 The Air Passageway
 - 10.2.2 The Lungs
 - 10.2.3 The Mechanism of Breathing
- 10.3 Respiratory Disorders (Bronchitis, Emphysema, Pneumonia, Asthma, Lung Cancer, Bad Effects of Smoking)

Unit-11 : HOMEOSTASIS

- 11.1 Homeostasis in Plants
 - 11.1.1 Removal of Extra Carbon Dioxide and Oxygen
 - 11.1.2 Removal of Extra Water
 - 11.1.3 Removal of other Metabolic Wastes
 - 11.1.4 Osmotic Adjustments in Plants

- 11.2 Homeostasis in Humans
 - 11.2.1 Skin
 - 11.2.2 Lungs
- 11.3 Urinary System of Humans
 - 11.3.1 Structure of Kidney
 - 11.3.2 Functioning of Kidney
 - 11.3.3 Osmoregulatory Function of Kidney
- 11.4 Disorders of Kidney
 - 11.4.1 Kidney Stones
 - 11.4.2 Kidney Failure

Unit-12 : COORDINATION AND CONTROL

- 12.1 Types of Coordination (Coordinated Action)
- 12.2 Human Nervous System
 - 12.2.1 Nerve Cell or Neuron
 - 12.2.2 Divisions of the Nervous System
 - 12.2.3 Reflex Action
- 12.3 Receptors in Humans
 - 12.3.1 Eye
 - 12.3.2 Ear
- 12.4 Endocrine System
 - 12.4.1 Important Endocrine Glands
 - 12.4.2 Feedback Mechanisms
- 12.5 Disorders of Nervous System
 - 12.5.1 Paralysis
 - 12.5.2 Epilepsy

Unit-13 : SUPPORT AND MOVEMENT

- 13.1 Human Skeleton
 - 13.1.1 Role of Skeletal System
 - 13.1.2 Bone and Cartilage
 - 13.1.3 Components of Human Skeleton
- 13.2 Types of Joints
 - 13.2.1 Roles of Tendons and Ligaments
- 13.3 Muscles and Movement
- 13.4 Skeletal Disorders
 - 13.4.1 Osteoporosis
 - 13.4.2 Arthritis

**SECTION: 4
CONTINUITY IN LIFE**

Unit-14 : REPRODUCTION

- 14.1 Reproduction
- 14.2 Methods of Asexual Reproduction
 - 14.2.1 Binary Fission
 - 14.2.2 Fragmentation
 - 14.2.3 Budding
 - 14.2.4 Spore Formation
 - 14.2.5 Parthenogenesis
 - 14.2.6 Vegetative Propagation
- 14.3 Sexual Reproduction in Plants
 - 14.3.1 Sexual Reproduction in Flowering Plants
 - 14.3.2 Pollination
 - 14.3.3 Development and Structure of Seed
 - 14.3.4 Germination of Seed
- 14.4 Sexual Reproduction in Animals
 - 14.4.1 Formation of Gametes (Gametogenesis)
 - 14.4.2 Fertilization
 - 14.4.3 Reproduction in Rabbit
 - 14.4.4 Growth in Human Population and its Consequences
 - 14.4.5 Aids (A Sexually Transmitted Disease)

Unit-15 : INHERITANCE

- 15.1 Introduction to Genetics
- 15.2 Chromosomes and Genes

- 15.3 Mendel's Laws of Inheritance
 - 15.3.1 Mendel's Law of Segregation
 - 15.3.2 Mendel's Law of Independent Assortment
- 15.4 Co-Dominance and Incomplete Dominance
- 15.5 Variations and Evolution
 - 15.5.1 Variations lead to Evolution
 - 15.5.2 Artificial Selection

SECTION: 5 ECOLOGY

Unit-16 : MAN AND HIS ENVIRONMENT

- 16.1 Levels of Ecological Organization
 - 16.1.1 Components of Ecosystem
- 16.2 Flow of Materials and Energy in Ecosystems
 - 16.2.1 Flow of Energy
 - 16.2.2 Flow of Materials
 - 16.2.3 Ecological Pyramids
 - 16.2.4 Biogeochemical Cycles
- 16.3 Interactions in Ecosystems
 - 16.3.1 Raw materials
 - 16.3.2 Process
- 16.4 Ecosystem Balance and Human Impacts
 - 16.4.1 Global Warming
 - 16.4.2 Acid Rain
 - 16.4.3 Deforestation
 - 16.4.4 Overpopulation
 - 16.4.5 Urbanization
- 16.5 Pollution; Consequences and Control
 - 16.5.1 Air Pollution
 - 16.5.2 Water Pollution
 - 16.5.3 Land Pollution
- 16.6 Conservation of Nature
 - 16.6.1 Plans for the conservation of Nature

Unit-17 : BIOTECHNOLOGY

- 17.1 Introduction of Biotechnology Scope and Importance of Biotechnology
- 17.2 Fermentation
 - 17.2.1 Fermentation in Biotechnology
 - 17.2.2 Fermenter
- 17.3 Genetic Engineering
 - 17.3.1 Objectives of Genetic Engineering
 - 17.3.2 Basic Steps in Genetic Engineering
 - 17.3.3 Achievements of Genetic Engineering
- 17.4 Single-Cell Protein

Unit-18 : PHARMACOLOGY

- 18.1 Medicinal Drugs (Principle usage of important Medicinal Drugs)
- 18.2 Addictive Drugs (Drug Addiction and associated problems)
- 18.3 Antibiotics and Vaccines

LIST OF PRACTICALS FOR CLASS-IX (PART-I)

1. Study of different types of bacteria, Amoeba, Paramecium, Volvox with the help of prepared slides and from fresh culture /charts.
2. Study of external morphology of mustard plant and microscopic examination of root, stem, leaf, flower, fruit and seeds.
3. Identification of major organs and organ systems in a dissected frog (Dissection by demonstrator / teacher).
4. Recognition of different animals and plants from fresh and preserved specimens on the basis of apparent distinguishing taxonomic characters.

5. Evaluation of graphs of a population of an insect (endangered due to excessive use of insecticides) and interpret the reasons for its endangered status.
6. Use of microscope to observe the movement of small objects.
7. Microscopic examination of an animal cell (e.g. from frog's blood) and a plant cell (e.g. from onion epidermis) using an appropriate temporary techniques such as iodine or methylene blue.
8. Identification of different parts of the cell from fresh preparations.
9. Preparation of the wet mounts of tissue from flowering plants and study of plant and animal tissues from charts and prepared slides.
10. Determination of the effect of tonicity on plasmolysis and deplasmolysis in plant cells or in red blood cell.
11. Data collection on the number of stomata per unit area on various plant leaves that grow in areas of differing humidity and compilation of data and graph it to determine whether there is a relationship between the variables.
12. Observation of various stages of mitosis and meiosis by slides, model and charts.
13. Preparations of root tip squashes and study stages of mitosis
14. To demonstrate working of an enzyme in vitro e.g. pepsin working on meat in test tube.
15. Experiment to test enzyme action by putting diastase in a starch solution in test tube at 37° C and after fifteen minutes performing iodine test for presence of starch.
16. To demonstrate the process of photosynthesis using aquatic plant, Hydrilla.
17. Identification and labeling of the cellular and tissue structure in the CS of a leaf through observation under the microscope.
18. To investigate the necessity of chlorophyll, light and carbon dioxide for photosynthesis.
19. To demonstrate the process of respiration in germinating seed by using limewater.
20. To investigate the release of carbon dioxide and heat during aerobic respiration in germinating seeds.
21. Food tests: Benedict's test for reducing sugar, iodine test for starch, spot test and emulsion test for fat, and Biuret test for protein in solution.
22. Microscopic examination of a transverse section of the small intestine to show the villi.
23. Measurement of differences in length / weight of raw potato strips in concentrated salt solution and water.
24. Observation of root hairs on growing root of onion, carrot etc.
25. Microscopic observations of the structure and number of stomata in the epidermal peel of a leaf.
26. To investigate the rate of water loss at the two surfaces of a leaf by using cobalt chloride paper.
27. To investigate transpiration in potted plant under a bell jar.
28. Identification of xylem and phloem tissues in the prepared slides of stem, root and leaf.
29. To investigate the pathway of water in parts of plant using a suitable stain and compare sizes of various types of cells.
30. Identification of red and white blood cells under the light microscope on prepared slides and in diagrams and photomicrographs.
31. To investigate the effect of physical activity on pulse rate.
Experiment to show the capillary flow in fishtail or fin or frog's web.

LIST OF PRACTICALS FOR CLASS-X (PART-II)

1. Activity to compare the breathing rate at rest and after exercise.
2. Experiment to find out how much air a person can take into his / her lungs.
3. Demonstration of the presence of carbon dioxide in the exhaled air.
4. Demonstration of the presence of tar in cigarette smoke and also showing by charts and pictures the difference of lungs of smokers and non-smokers.
5. Examination of the structure of the kidney (Sheep kidney / model).
6. Observation and recording of the difference in quickness of response of the two types of co-ordination (by asking a student to say few words in front of class and observe the changes in heart beat).

7. Experiment to observe the contraction in the shin muscle of frog in a petri dish filled with methylene blue and using 12V.DC current.
8. Identify the different parts and draw a labeled diagram of longitudinal of eye of a sheep or bull.
9. Investigation of the nature of bone (by putting three pieces of the bone of lamb in water, NaOH and dilute HCL).
10. Observation of binary fission in Amoeba by using slides, photomicrograph and charts.
11. Observation of budding in yeast from prepared slides.
12. Examination of a bulb (onion), corm (colocasia), rhizome (ginger) and stem tuber (potato) and their cultivation to get new plants.
13. Propagation by stem cutting (rose or any locally available plant) and bryophyllum leaf.
14. Examination of mustard flower, gram seed and maize grain.
15. Investigation of the conditions for seed germination.
16. Recording the heights of class fellows to predict which kind of variation is it and presentation of the data of class fellows height in graphical form (either histogram or bar chart).
17. Investigation of an ecosystem e.g. an aquarium or a pond.
18. Investigation about the role of yeast and bacteria in the fermentation of flour and milk.

Prescribed Book: Biology for Part – II (Class –X)

Authors: Dr. Rass Masood , Dr. Farhat Iqbal , Dr. Saraphine Salik , Farhat Zahra

Published by: PLD Publishers, Lahore

For: Punjab Curriculum and TextBook Board, Lahore



Part-I	50 Marks
Part-II	50 Marks
Practical	50 Marks
Total	150 Marks

Board of Intermediate & Secondary Education, Lahore

- UNIT 8:** 7.7 Error Identification and Debugging
WEB DEVELOPMENT WITH HTML, CSS AND JAVASCRIPT
 Introduction
- 8.1 Web Development
- 8.2 Basic Components of Web Development
- 8.3 Getting Started with HTML 8.4 HTML Basic Structure
- 8.5 Creating Content with HTML 8.6 Styling with CSS
- 8.7 Introduction to JavaScript 8.8 Developing and Debugging
- UNIT 9:** **DATA SCIENCE AND DATA GATHERING**
 Introduction
- 9.1 Data 9.2 Data Types
- 9.3 Organising and Analysing Data 9.4 Data Types
- 9.5 Data Storage Techniques 9.6 Data Visualization
- 9.7 Data Pre-Processing and Analysis
- 9.8 Collaborative Tools and Cloud Storage
- 9.9 Introduction to Data Science
- 9.10 Big Data and Its Applications
- UNIT 10:** **EMERGING TECHNOLOGIES IN COMPUTER SCIENCE**
 Introduction
- 10.1 Introduction to Artificial Intelligence (AI)
- 10.2 AI Algorithms and Techniques
- 10.3 Introduction to Internet of Things (IoT)
- 10.4 Implications and Future of Emerging Technologies
- UNIT 11:** **ETHICAL, SOCIAL AND LEGAL CONCERNS IN COMPUTER USAGE**
 Introduction
- 11.1 Responsible Computer Usage
- 11.2 Safe and Secure Operation of Digital Platforms
- 11.3 Best Practices in Online Behavior
- 11.4 Legal and Ethical Frameworks
- 11.5 Intellectual Property Rights 11.6 Responsible Internet Use
- 11.7 Impact of Computing on Society
- UNIT 12:** **ENTREPRENEURSHIP IN DIGITAL AGE**
 Introduction
- 12.1 Entrepreneurship
- 12.2 Entrepreneurship in the Digital Landscape
- 12.3 Digital Tools and Platforms 12.3 Business Idea Generation
- 12.5 Developing Business Plans
- 12.6 Ethical and Sustainable Entrepreneurship

Authors: **Prof. Dr. Muhammad Atif,**
 (Phd Computer Science) Professor of Computer Science, Lahore
 Garrison University, Lahore

Prof. Dr. Syed Waqar UI Qounain Jaffry,
 (Phd Computer Science) Chairman Dept. of IT, University of the
 Punjab, Allama Iqbal Campus (Old Campus) Shahrah-e-Quaid-e-
 Azam, Lahore.

Published by: **Anjuman Himayat-e-Islam**

Printed by: **Ishaq Al-Fateh Printers**

For: Punjab Curriculum and TextBook Board, Lahore

Marks: 50	Part-II (Class-IIX)	Time: 2:00 Hours
------------------	----------------------------	-------------------------

Unit 1: Introduction to Programming

- 1.1 Programming Environment
Integrated Development Environment (IDE), Text Editor, Compiler
- 1.2 Programming Basics
Reserved Words, Structure of a C Program, Purpose and Syntax of comments in C Programme
- 1.3 Constants and Variables
Constants, Variables, Data type of a Variable, Name of a variable, Variable Declaration, Variable initialization

Unit 2: User Interaction

- 2.1 Input/output (I/O) Functions
printf(), Format Specifiers, scanf(), getch(), Statement Terminator, Escape Sequence
- 2.2 Operators
Assignment Operators, Arithmetic Operators, Relational Operators, Assignment Operator (=) and equal to Operator (==), Logical Operators, Unary vs Binary Operators, Operators' Precedence

Unit 3: Conditional Logic

Control Statements
Selection Statements
If Statement, If-else Structures, Nested If-else Structures, Solved Example Problems

Unit 4: Data and Repetition

Data Structures
Array, Array Declaration, Array Initialization, Accessing array elements, Using variables as array indexes
Loop Structures
General Structure of loops, General syntax of for loop, Nested Loops, Solved Example Problems, Loops and Arrays, Solved Examples Problems

Unit 5: Functions

Types of Functions, Advantages of Functions, Structure of a Function, Defining a Function
Glossary Indexes Answers

Authors: Dr. Muhammad Adnan Hashmi (Assistant Professor)
Department of Computer Sciences & IT, The University of Lahore

Editor: Dr. Mudasser Naseer (Associate Professor)
Department of Computer Sciences & IT, The University of Lahore

Published by: Punjab Curriculum and TextBook Board, Lahore



MATHEMATICS**(For Science Students Only)**

Part – I 75 Marks

Part – II 75 Marks

Total 150 Marks

Part-I (Class-IX)	Marks: 75	Time: 2:30 Hours
--------------------------	------------------	-------------------------

Unit-1 : REAL NUMBERS

- 1.1 Introduction to Real Numbers
- 1.2 Radical Expressions
- 1.3 Applications of Real Numbers in Daily Life

Unit-2 : LOGARITHMS

- Introduction
- 2.1 Scientific Notation
- 2.2 Logarithm
- 2.3 Common Logarithm
- 2.4 Laws of Logarithm

Unit-3 : SETS AND FUNCTIONS

- Introduction
- 3.1 Mathematics as the Study of Patterns, Structures and Relationships
- 3.2 Operations on Sets
- 3.3 Binary Relations

Unit-4 : FACTORIZATION AND ALGEBRAIC MANIPULATION

- Introduction
- 4.1 Identifying Common Factors and Trinomials Concretely, Pictorially and Symbolically
- 4.2 Factorization of the Expression
- 4.3 Highest Common Factor (HCF) and Least Common Multiple (LCM) of Algebraic Expression
- 4.4 Square Root of an Algebraic Expression

Unit-5 : LINEAR EQUATIONS AND INEQUALITIES

- Introduction
- 5.1 Linear Equation
- 5.2 Linear Inequalities
- 5.3 Feasible Solution

Unit-6 : TRIGONOMETRY

- Introduction
- 6.1 Identifying Angles in Standard Position (Degrees and Radians)
- 6.2 Trigonometric Ratios
- 6.3 Trigonometric Identities
- 6.4 Values of Trigonometric Ratios of Special Angles
- 6.5 Solution of a Triangle
- 6.6 The Angle of Elevation and the Angle of Depression

Unit-7 : COORDINATE GEOMETRY

- Introduction
- 7.1 Coordinate Plane
- 7.2 Equations of Straight Lines
- 7.3 Applications of Coordinate Geometry in Real Life Situations

Unit-8 : LOGIC

- Introduction
- 8.1 Statement

Unit-9 : SIMILAR FIGURES

- Introduction
- 9.1 Similarity of Polygons
- 9.2 Area of Similar Figures
- 9.3 Volume of Similar Solids
- 9.4 Geometrical Properties of Polygon and their Applications
- Unit-10 : GRAPHS OF FUNCTIONS**
- Introduction
- 10.1 Functions and their Graphs
- 10.2 Exponential Growth/Decay of a Practical Phenomenon through its Graph
- Unit-11 : LOCI AND CONSTRUCTION**
- Introduction
- 11.1 Construction of Triangles
- 11.2 Perpendicular Bisectors and Medians of a Triangle
- 11.3 Angle Bisector of a Triangle
- 11.4 Altitudes of Triangle
- 11.5 Loci and construction
- 11.6 Real Life Application of Loci
- Unit-12 : INFORMATION HANDLING**
- Introduction
- 12.1 Ungrouped and Grouped Data
- 12.2 Measures of Location (Central Tendency)
- Unit-13 : PROBABILITY**
- Introduction
- 13.1 Probability of Single Event
- 13.2 Probability of an Event Not Occurring
- 13.3 Real Life Problems Involving Probability
- 13.4 Relative Frequency as an Estimate of Probability
- 13.5 Real Life Application of Relative Frequency
- 13.6 Expected Frequency
- 13.7 Real Life Application on Expected Frequency

Prescribed Book: Mathematics (Science Group) for Part – I (Class –IX)

Muhammad Akhtar Shirani, Senior Subject Specialist (Mathematics)

Authors: Madiha Mahmood, Subject Specialist (Statistics)

Ghulam Murtaza, Subject Specialist (Mathematics)

Published by: Kiran Trading Corporation, Lahore.

Printed by: Ishaq Al Fateh Printers.

For: Punjab Curriculum and TextBook Board, Lahore

Part-II (Class-X)	Marks: 75	Time: 2:30 Hours
--------------------------	------------------	-------------------------

Unit-1 : QUADRATIC EQUATIONS

- 1.1 Quadratic Equation
- 1.2 Solution of quadratic equations
- 1.3 Quadratic Formula
- 1.4 Equations reducible to quadratic form
- 1.5 Radical equations

Unit-2 : THEORY OF QUADRATIC EQUATIONS

- 2.1 Nature of the roots of a quadratic equation
- 2.2 Cube Roots of Unity and their Properties
- 2.3 Roots and Co-efficient of a quadratic equation
- 2.4 Symmetric functions of the roots of a quadratic equation

-
- 2.5 Formation of a quadratic equation
 - 2.6 Synthetic Division
 - 2.7 Simultaneous Equations
 - Unit-3 : VARIATIONS**
 - 3.1 Ratio, Proportions and Variations
 - 3.2 Theorems on Proportions
 - Unit-4 : PARTIAL FRACTIONS**
 - 4.1 Fraction
 - 4.1.1 Rational Expressions behave like Rational Numbers
 - 4.1.2 Rational Expression
 - 4.1.3 Properties of Rational Expression
 - 4.2 Resolution of Fraction into Partial Fractions
 - Unit-5 : SETS AND FUNCTIONS**
 - 5.1 Sets
 - 5.2 Binary Relation
 - 5.3 Function or Mapping
 - Unit-6 : BASIC STATISTICS**
 - 6.1 Frequency Distribution
 - 6.2 Cumulative Frequency Distribution
 - 6.3 Measures of Central Tendency
 - 6.4 Measures of Dispersion
 - Unit-7 : INTRODUCTION TO TRIGNOMETRY**
 - 7.1 Measurement of an Angle
 - 7.2 Sector of a Circle
 - 7.3 Trigonometric Ratios
 - 7.4 Trigonometric Identities
 - 7.5 Angle of Elevation and Angle of Depression
 - Unit-8 : PROJECTION OF A SIDE OF A TRIANGLE**
 - Theorem 1 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 2 In any triangle, the square on the side opposite to acute angle is equal to the sum of the squares on the sides containing that acute angle diminished by twice the rectangle contained by one of those sides and the projection on it of the other.
 - Theorem 3 In any triangle, the sum of the squares on any two sides is equal to twice the square on half the third side together with twice the square on the median which bisects the third side.
 - Unit-9 : CHORDS OF CIRCLE**
 - Theorem 1 One and only one circle can pass through three non-collinear points.
 - Theorem 2 A straight line, drawn from the centre of a circle to bisect a chord (which is not a diameter) is perpendicular to the chord.
 - Theorem 3 Perpendicular from the centre of a circle on a chord bisects it.
 - Theorem 4 If two chords of a circle are congruent, then they will be equidistant from the centre.
 - Theorem 5 Two chords of a circle which are equidistant from the centre, are congruent.
 - Unit-10 : TANGENT TO A CIRCLE**
 - Theorem 1 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.
-

- Theorem 2 The tangent to a circle and the radial segment joining the point of contact and the centre are perpendicular to each other.
- Theorem 3 Two tangents drawn to a circle from a point outside it, are equal in length.
- Theorem 4a If two circles touch externally, then the distance between their centres is equal to the sum of their radii.
- Theorem 4b If two circles touch each other internally, then the point of contact lies on the line segment through their centres and distance between their centres is equal to the difference of their radii.

Unit-11 : CHORDS AND ARCS

- Theorem 1 If two arcs of a circle (or of congruent circles) are congruent, then the corresponding chords are equal.
- Theorem 2 If two chords of a circle (or of congruent circles) are equal, then their corresponding arcs (minor, major or semi-circular) are congruent. In equal circles or in the same circle, if two chords are equal, they cut off equal arcs.
- Theorem 3 Equal chords of a circle (or of congruent circles) subtend equal angles at the centre (at the corresponding centres).
- Theorem 4 If the angles subtended by two chords of a circle (or congruent circles) at the centre (corresponding centres) are equal, the chords are equal.

Unit-12 : ANGLES IN A SEGMENT OF A CIRCLE

- Theorem 1 The measure of a central angle of a minor arc of a circle is double than that of the angle subtended by the corresponding major arc.
- Theorem 2 Any two angles in the same segment of a circle are equal.
- Theorem 3 The angle
In a semi-circle is a right angle,
In a segment greater than a semi-circle is less than a right angle
In a segment less than a semi-circle is greater than a right angle.
- Theorem 4 The opposite angles of any quadrilateral inscribed in a circle are supplementary.

Unit-13 : PRACTICAL GEOMETRY CIRCLES

- 13.1 Construction of a Circle
- 13.2 Circles Attached to Polygons
- 13.3 Tangent to the Circle
- 13.4 Answers
- 13.5 Symbols and abbreviations
- 13.6 Table of logarithm
- 13.7 Glossary
- 13.8 Index

Prescribed Book: Mathematics (Science Group) for Part – II (Class –X)

Authors: Prof. Muhammad Habib , Prof. Ch. Asghar Ali , Prof. Abdul Rauf Khan , Prof. Muhammad Moeen

Published by: ILMI KITAB KHANA, LAHORE

For: Punjab Curriculum and TextBook Board, Lahore



GENERAL SCIENCE

Part – I	75 Marks
Part – II	75 Marks
Total	150 Marks

Part-I (Class-IX)	Marks: 75	Time: 2:30 Hours
--------------------------	------------------	-------------------------

- Chapter-1 : Introduction and Role of Science**
- 1.1 Introduction to the history of Science and Islamic injection of knowledge with special reference to the contribution by Muslim and Pakistani Scientists in the fields of Science.
 - 1.2 Branches of Science and their inter relationship.
 - 1.3 Role of Science and Technology and its impact for bringing improvement in the quality of life.
 - 1.4 Limitations.
- Chapter-2 : Our life and Chemistry**
- 2.1 Description of three basic elements such as C, H₂, and O₂. Explanation of photosynthesis and respiration.
 - 2.2 Explanation of different allotropic forms of carbon; types of carbon compounds and their abundance in nature.
 - 2.3 Properties of water as a solvent, density of water and ice.
 - 2.4 Composition of air and role of the constituents in the properties of air. Rare gasses and their uses.
 - 2.5 Importance and application of elements like Na, K, Mg, P, Fe, Cl, I, F, for the maintenance of our health, agriculture and daily life.
- Chapter-3 : Biochemistry and Biotechnology**
- 3.1 Definition of Metabolism. A brief description of Metabolism and fate of Carbohydrates, fats and proteins in human body, Enzymes and role in our daily life.
 - 3.2 What are Enzymes? Their role in Metabolism. Definition of Enzymes and role in our daily life.
 - 3.3 Blood and its function.
 - 3.4 DNA as hereditary material.
 - 3.5 Genetic Engineering.
 - 3.6 Improvement of crops and control of crop diseases.
 - 3.7 Antibiotics and Vaccines.
 - 3.8 Recycling of waste and scarce materials.
- Chapter-4 : Human Health**
- 4.1 Major components of food.
 - 4.2 Food and Energy. Energy requirements regarding age, sex, body size, climate and working conditions.
 - 4.3 Balanced diet for babies, young, old, pregnant and feeding mothers.
 - 4.4 Definition of Nervous System with reference to Endospermic Glands.
 - 4.5 Description of different stages of life.
 - 4.6 Importance of exercise for physical fitness, healthy living and as a measure against obesity.
 - 4.7 First aid and its administration.
- Chapter-5 : Diseases, Causes and Prevention**
- 5.1 Diseases, their causes i.e Virus, Bacteria, Parasites, Germs, etc and preventive measures.

- 5.2 How do Germs spread?
- 5.3 Protection from Germs and diseases caused by them.
- 5.4 Smoke, smoking and ill health. Different diseases caused by smoke & smoking.
- 5.5 Mental illness, its cure.
- 5.6 Difference between Drugs, Medicines and Narcotics, their uses and abuses on Society.
- Chapter-6 : Environment and Natural Resources**
- 6.1 The atmosphere, and its different layers. Description of Green House effect and its importance. Different climatic patterns.
- 6.2 Different kinds of Pollution and their reduction. Effect of Pollution on House life.
- 6.3 Different kinds of Minerals and Fossil Fuels, their occurrence and uses. Need for conservation of natural resources.
- 6.4 Briefly discuss the crops and fruits of Pakistan. Production trends in principal crops; mechanization of agriculture, new implements.
- 6.5 Different dairy and poultry products and methods for their improvement.
- 6.6 Importance of wildlife, national parks, conservation of wildlife and endangered species.
- 6.7 Effects of rising production on environment, poverty and quality of life.

Part-II (Class-X)**Marks: 75****Time: 2:30 Hours**

- Chapter-7 : Energy**
- 7.1 Introduction of Energy and its form.
- 7.2 Energy demands and different methods of acquiring Energy.
- 7.3 Development of new Energy resources. Explain different sources of Energy. Conventional and non-conventional.
- 7.4 Know how the Energy is measured. Methods and units of measurement of Energy and its uses.
- 7.5 Energy and the environment, specially with respect to thermal pollution and nuclear fuel hazards. Steps to minimize them.
- 7.6 Energy conservation. Conservation of Energy at home, school, industries, etc.
- Chapter-8 : Current Electricity**
- 8.1 Introduction and description of various concepts relating to current Electricity.
- 8.2 Components of Circuits. Their working and use in electrical circuits.
- 8.3 Direct and alternating Current... introducing purposes along with their measures.
- 8.4 Process of Electric supply for domestic purposes along with their measures.
- 8.5 Electric shocks, burns, fire, explosion and safety precautions against them.
- 8.6 Introduction ammeter, voltmeter, multi meter, analogue and digital meter & their uses.
- Chapter-9 : Basic Electronics**
- 9.1 Basic working principle semi-conductor diode.
- 9.2 Description of Radio waves, Radio systems, Television, Cable and Satellite TV.

- 9.3 Computers, microprocessors, their importance and uses in different fields.
- 9.4 Description of Information Technology, elaborate with simple example, Communication systems.

Chapter-10 : Science and Technology

- 10.1 Description of the advancement of Science and Technology for the development of the country.
Function and uses of Laser Optical fiber system Satellites and Radar etc.
- 10.2 Simple introduction to radioactivity, properties, uses of radiations emitted by radio active substances and Radio Isotopes in various fields (health, agriculture, etc).
- 10.3 X-rays, Ultrasound, ECG, EEG, MRI, CT Scan, Angiography.
- 10.4 Some important Industries of Pakistan. Use of technology in some important Industries of Pakistan.

Chapter-11 : Space and Pakistan Nuclear Program

- 11.1 Space exploration and its benefits to Science and Technology.
- 11.2 Pakistan's Space Programme (SUPARCO)
- 11.3 Pakistan's Nuclear Programme.
- 11.4 Dengue Fever

Prescribed Book: General Science

Authors: Prof. Nazir Ahmad Chughtai Prof. Dr. Javid Iqbal
Prof. Dr. Ijaz Rasoul Dr. Mahmood-ul-Hassan
Prof. Mrs. Rizwana Chima Prof. Muhammad Nisar
Miss Suryya Usmani (R) Mr. Aamir Raza
Dr. Capt. Muhammad Akhtar Baig

Published by: Naseer Sons, Lahore
For: Punjab Curriculum and TextBook Board, Lahore



CIVICS

Part – I	75 Marks
Part – II	75 Marks
Total	150 Marks

Part-I (Class-IX)	Marks: 75	Time: 2:30 Hours
--------------------------	------------------	-------------------------

- Chapter-1 : INTRODUCTION TO CIVICS**
 Definition
 Nature
 Significance
 Co-relation with: Sociology Economics
 Ethics History
- Chapter-2 : INDIVIDUALS IN INTERACTION**
 1. Civic relationships in the following groups:
 Family Nation Community
 Unman Society
- Chapter-3 : STATE**
 1. Definition:
 2. Constitutional Elements of State/Islamic State;
 3. Functions of Islamic State;
 4. Role of Mass Media in a Welfare State with reference to I.T.;
- Chapter-4 : GOVERNMENT**
 1. Definition 2. Significance
 3. Executive 4. Legislature
 5. Judiciary 6. Democracy
 7. Dictatorship 8. Good Government and Welfare State
 9. Government's role and functions in Islamic perspective
- Chapter-5 : CITIZEN AND CITIZENSHIP**
 1. Definition of Citizen & Citizenship.
 2. General characteristics of good Citizenship.
 3. Nature and Significance of Citizenship in Islamic perspective

Part-II (Class-X)	Marks: 75	Time: 2:30 Hours
--------------------------	------------------	-------------------------

- Chapter-6 : RIGHTS AND RESPOBSIBILITIES**
 1. Definition of Citizens and Citizenship
 2. Rights and Responsibilities with special reference to 1973 Constitution
 3. Fundamental' Human Rights
 4. Rights and responsibilities in an Islamic State
 5. Human Rights violation
- Chapter-7 : IDEOLOGY OF PAKISTAN AND PAKISTAN MOVEMENT**
 1. Meaning and Nature of Ideology of Pakistan
 2. Significance of Ideology of Pakistan for Welfare State
 3. National Integrations and cohesion
 i. Sir Syed Ahmad Khan
 ii. Allama Muhammad Iqbal
 iii. Quid-e-Azam Muhammad Ali Jinnah
 iv. Formation of Muslim League 1906
 v. Muhammad Ali Jinnah's 14 points - 1930

- vi. Lahore resolution - 1940
- vii. 3rd June Plan and Emergence of Pakistan
- viii. Initial problems forced by Pakistan

Chapter-8 : CONSTITUTIONAL DEVELOPMENT IN PAKISTAN

- 1. A brief survey of Constitutional Development in Pakistan.
- 2. Objective resolution.
- 3. Salient features of 1956 Constitutions 1962, 1973.
- 4. Islamic provisions of the 1973 Constitution.

Chapter-9 : LOCAL GOVERNMENT IN PAKISTAN

- 1. Meaning of local self-Government.
- 2. Brief history of local self-Government in Pakistan.
- 3. Devolution of power plan of Military Regime – an Introduction
- 4. Structure and functions.

Chapter-10 : PAKISTAN AND ITS NEIGHBOURS

Introduction to Neighboring Countries Afghanistan, China, Iran, India
Relations with Neighboring Countries.

Prescribed Book: Civics for Classes – (IX–X)

Authors: Prof. Dr. Sultan Khan , Prof. Khaleema Naz Afridi ,
Prof. Rahmat Ullah Ch.

Published by: Khyam Publisher Urdu Bazar, Lahore

For: Punjab Curriculum and TextBook Board, Lahore



EDUCATION

Part – I	75 Marks
Part – II	75 Marks
Total	150 Marks

Part-I (Class-IX)	Marks: 75	Time: 2:30 Hours
-------------------	-----------	------------------

- Chapter-1 : CONCEPTS OF EDUCATION**
1. Definitions and meaning of Education
 2. General concept view point of Education
 3. Islamic Concepts/View point of Education
- Chapter-2 : SCOPE AND FUNCTIONS OF EDUCATION**
1. Scope of Education as a discipline
 2. Function of Education for development of individual and Society
- Chapter-3 : HUMAN DEVELOPMENT AND GROWTH**
1. Meaning and definition of Development
 2. Infancy
 3. Early Childhood
 4. Childhood
 5. Adolescence
- Physical Development Mental
- Chapter-4 : LEARNING**
1. Learning (meaning and definition)
 2. Biological Factors influencing learning
 3. Individual differences in learning
- Chapter-5 : HOME, SCHOOL, AND SOCIETY**
1. Meaning and definition of Home, School and Society
 2. Agencies of education and their relationship
 3. Formation of Society
 4. Relationship between School, Community and Society
 5. Ways to promote Home, School and Community relationship

Part-II (Class-X)	Marks: 75	Time: 2:30 Hours
-------------------	-----------	------------------

- Chapter-6 : EDUCATION IN PAKISTAN**
1. Aims of Education in Pakistan
 2. Types of Education
 - General Education
 - Professional Education
 3. Stages of Education
 - Elementary
 - Secondary
 - Tertiary
- Chapter-7 : CURRICULUM**
4. Meaning and definition of Curriculum
 5. Elements of Curriculum
 1. Objectives
 2. Content
 3. Teaching Methodology
 4. Evaluation
 6. Interrelationship of the various elements
 7. Process of Curriculum Development in Pakistan

Chapter-8 : ORGANIZATION OF SCHOOL ACTIVITIES

1. Importance of Co-Curricular Activities in School
2. Role of Co-Curricular Activities in the development of an individual
3. The Role of Environment in organizing activities

Chapter-9 : GUIDANCE AND COUNSELING

1. Importance and definition of Guidance and Counseling
2. Problems of student at school
 - Social Problems
 - Economic Problems
 - Vocational Problems
 - Personal Problems
3. Role of guidance and counseling in school

Prescribed Book: Education for classes – IX-X

Authors: Dr. M. Mirza , Abdul Slam Ch , Dr. Khalid Rashid

Published by: Fazal Sons, Lahore

For: Punjab Curriculum and TextBook Board, Lahore



ECONOMICS

Part – I	75 Marks
Part – II	75 Marks
Total	150 Marks

Part-I (Class-IX)	Marks: 75	Time: 2:30 Hours
--------------------------	------------------	-------------------------

Chapter-1 :	INTRODUCTION Meaning of Economics 1. Adam Smith 2. Lionel 3. Alfred Marshall 4. Robbins
Chapter-2 :	SUBJECT MATTER OF ECONOMICS 1. Wants 2. Goods and services 3. Efforts 4. Utility, Scarcity, Value and Price
Chapter-3 :	DEMAND 1. Definition 2. Law of Demand (Graphic representation of the law of Demand) 3. Other factors affecting Demand
Chapter-4 :	SUPPLY 1. Definition 2. Stock and Supply 3. Law of Supply with graphic representation 4. Factors affecting Supply
Chapter-5 :	MARKET AND PRODUCTION 1. Definition i) Market ii) Kinds of Market a) Perfect and Imperfect Markets b) Short and Long Run Markets 2. Production i) Importance of Factors of Production a) Land b) Labour c) Capital d) Organization
Chapter-6 :	EQUILIBRIUM AND PRICE DETERMINATION 1. Concept of Equilibrium 2. Equilibrium between Demand and Supply
Chapter-7 :	ECONOMIC PROBLEMS OF PAKISTAN AND REMEDIAL MEASURES 1. Poverty 2. Illiteracy 3. Agricultural Backwardness 4. Industrial Backwardness 5. Population Pressure and Migration 6. Low per Capita Income

Part-II (Class-X)	Marks: 75	Time: 2:30 Hours
--------------------------	------------------	-------------------------

Chapter-8 :	BASIC CONCEPTS 1. Income (Personal and National) 2. G.N.P 3. G.D.P 4. N.N.P per Capita Income, Disposable Personal Income 5. Consumption
--------------------	--

6. Savings
7. Investments
- Chapter-9 : MONEY**
1. Barter System and its Difficulties
 2. Money – its Definitions and Functions
 3. Kinds of Money – Metallic, Paper and Credit Money
 4. Examples from Pakistan
- Chapter-10 : BANKS**
1. Definition
 2. Kinds of Banks
 3. Central Bank and its Functions
 4. Interest Free Banking Examples of Saudi Arabia, Malaysia and Sudan.
- Chapter-11 : TRADE**
1. Definitions and differences between foreign and domestic trades.
 2. Advantages and disadvantages of foreign trade.
 3. Major exports and import of Pakistan.
- Chapter-12 : PUBLIC FINANCE**
1. Definition and difference between Public Finance and Private Finance.
 2. Budget and its Definition.
 3. Public Revenue
 4. Expenditure and Public Debt
- Chapter-13 : ECONOMIC DEVELOPMENT**
1. Definition of Economic Development
 2. Economic Development in:
 - a) Agricultural Sector
 - b) Industrial Sector
 - c) Trade and Banking Sectors
 - d) Development of Communications and Modern Technology.
- Chapter-14 : ECONOMIC SYSTEM OF ISLAM**
1. Basic Characteristics of Islamic System.
 2. Concept of Zakat, Usher, Charity and their role in poverty alleviation and employment generation.

Prescribed Book: Economics for Classes – (IX–X)

Authors: Azra Asmat Ullah Awan , Mahmood Ahmad Ch.

Published by: Azad Book Depot, Urdu Bazar, Lahore.

For: Punjab Curriculum and TextBook Board, Lahore



PHYSIOLOGY & HYGIENE

Part – I	75 Marks
Part – II	75 Marks
Total	150 Marks

Part-I (Class-IX)	Marks: 75	Time: 2:30 Hours
--------------------------	------------------	-------------------------

Chapter-1 : Our food and Eating Habits

- Ingredients Carbohydrates proteins, fats, mineral salts vitamins and water
- Energy requirements of the cells source of energy, food stuff chemical composition and nature of food stuffs, nutritional requirements.
- Balanced diet-quantity (calorific value of food) and quality
- Eating habits –regular meal time, hygiene of hands and mouth care of teeth and proper mastication, avoidance of over-eating.

Chapter-2 : Building Materials of Home Body

- Protoplasm-Brief outline of physical and chemical nature
- Cell-membranes/cytoplasm, and their functions
- Tissues-Epithelial, muscular, cartilage and bone
- Organs (only definition with few examples)

Chapter-3 : Types of micro organisms

A brief description of the nature of organisms; included in categories and the environment in which they survive and grow their importance for human beings.

- | | |
|-------------|--------------------------|
| a) Microbes | b) Viruses |
| c) Bacteria | d) Unicellular organisms |

Chapter-4 : Digestive system

- Digestive organs-External morphology of mouth (Tooth) Tongue, Salivary gland) Gullet Stomach, Intestines (Small and Large) Liver, gall-bladder and pancreas.
- Mechanism of digestion,
 - Digestion in mouth
 - Digestion in stomach
 - Digestion in intestines (Small and Large)
- Assimilation of food

Chapter-5 : Circulatory System

- Organs-Structure of heart and blood vessels (Arteries, Veins and Capillaries)
- Function of heart and blood vessels
- Blood-Composition and functions, for example, transportation coagulation and temperature control
- Blood transfusion and blood groups

Chapter-6 : Respiratory system

- Organs-structure and function of nose, pharynx, trachea, bronchi and lungs (Brief discussion of all except lungs which should be discussed in detail)
- Mechanism of respiration.
 - Breathing (Inspiration and expiration)
 - Exchange and transportation of gases
 - Respiration in tissues-exchange of gases

Chapter-7 : Excretory System

- What is excretion
- Excretory organs structure of kidney, structure of skin (The structure of lungs have already been discussed in the respiratory system)
- Physiology of excretion
 - The role of kidney in excretion
 - The role of skin in excretion

Part-II (Class-X)	Marks: 75	Time: 2:30 Hours
--------------------------	------------------	-------------------------

Chapter-8 : Nervous system

- a) Morphology of central nervous system. Brain; Spinal Cord
- b) Morphology of the neuron
- c) The organization of nerves; Sensory and motor nerves
- d) The nerve impulse
- e) The reflex action
- f) Function of the Nervous System. A brief description of the functions of various segments of brain.
- g) Sympathetic and para sympathetic nervous system
- h) Sense organs and their functions (Detailed account of eye and ear and briefly mention others)

Chapter-9 : Hormones

The secretion of Hormones from Endocrine Glands. The nature of Hormones. Major functions of following Hormones.

- a) Growth of Hormones
- b) Thyroxin
- c) Insulin
- d) Adrenalin

Chapter-10 : Support and Locomotion

- a) Functional morphology of muscle, cartilage and bone
- b) Skeleton (in practical only)
- c) Health of bones-role of calcium, phosphorus and vitamin D

Chapter-11 : Physiology of Exercise

- a) Oxygen requirements.
- b) Respiratory adjustments
- c) Circulatory. System adjustment
- d) Metabolic change in muscles

Chapter-12 : Hygiene of Living in Rural and Urban Areas

- a) Air. Composition, importance, contamination
- b) Water. Composition, importance, sources of water contamination
- c) Soil, importance, contamination
- d) Houses. Importance of living space, light ventilation and cleanliness

Chapter-13 : Principle of personal and community hygiene

- a) Personal-Body cleanliness, eating and drinking, daily movement of bowels, clothing (avoid tight dress, frequently change under clothes and exercise, etc.
- b) Community-proper maintenance of public place like parks, hospitals offices, cinemas, etc; proper disposal of wet, and dry refuse. Smoking and spitting at public places, etc, should be discouraged.

Chapter-14 : Diseases

- a) Origin
 - 1. Dietary
 - 2. Metabolic
 - 3. Hereditary
 - 4. Contagious
 - 5. Parasitic
- b) Causative agents
 - Virus, Bacteria, Protozoa, Arthropod, Helminthis
- c) Common diseases and their preventive measures
 - 1. Small pox
 - 2. Measles
 - 3. Typhoid
 - 4. Cholera
 - 5. Chicken pox
 - 6. Rabies
 - 7. Diphtheria
 - 8. Whooping cough
 - 9. Mumps
 - 10. Tetanus
 - 11. Malaria
 - 12. Worm
 - 13. Infection
 - 14. Diarrhea and dysentery
 - 15. Diseases due to insect infection
 - 16. Skin diseases

Chapter-15 : Socio-Economic Factors in National health

- Male-nutrition, what is malnutrition? Consequences of malnutrition. Contrast between health and physique of poorly fed and well individuals
- Infant mortality and child care
- Care of elderly people
- Stimulants-intoxicants and narcotics; effect of drug addiction on health

SUGGESTED EXPERIMENTS

for Class room demonstrations by teachers only

- | | | |
|------------------|--|--|
| Experiment No.1 | Identification of carbohydrates, proteins and fat by using Benedict's Solution Iodine Solution, Midlon's Reagent and paper | |
| Experiment No.2 | Detection of Amylase in saliva and its effect on starch by using iodine method | |
| Experiment No.3 | Microscopic study of blood (R.B.C. and W.B.C), using Leishment's Solution | |
| Experiment No.4 | Examination of capillary circulation in the web of frog | |
| Experiment No.5 | (a) For study of trachea and lungs, sheep's wind pipe and lungs could be displayed
(b) Demonstration of the mechanism of respiration (by using bell-jarparchment), Y-shaped glass tube and counting of pulse | |
| Experiment No.6 | Demonstration of muscle contraction by at least one of the methods listed below
(a) Mechanical (Pinching)
(c) Electrical (Dry cell) | |
| | (b) Chemical (Sodium Chloride)
(d) Cartilage | |
| Experiment No.7 | Examination of the following prepared slides under the microscopic
(a) Nerve cell
(c) Epithelia cells
(e) Bone | |
| | (b) Muscle cell
(d) Cartilage | |
| Experiment No.8 | Study of structure of eye and heart by using models, charts and dissection. | |
| Experiment No.9 | Study of ear by model of carts or film slides of Transparency | |
| Experiment No.10 | Study brain preserved in 4% formulin solution | |
| Experiment No.11 | Microscopic examination of polluted water | |
| Experiment No.12 | Morphological study of following insects
(a) Mosquito
(c) Cockroach
(e) Louse | |
| | (b) Bed bug
(d) House fly | |
| Experiment No.13 | Study of human skeleton with help of bones, charts film slides and transparencies | |
| Experiment No.14 | (a) Use of clinical thermometer (b) Lactometer | |
| Experiment No.15 | Exhibition of insecticides and gemicides | |
| Experiment No.16 | Cleaning of school premises, houses and surroundings | |

Prescribed Book: Physiology and Hygiene

Authors: Dr. Jamal –ud-Din Dr. S.A. Wajid

Publisher M/S Shaheen Publisher, Lahore

Physiology and Hygiene (English Version)

Publisher kitabistan Publishing Co., Lahore

Author as in Urdu Version

For: Punjab Curriculum and TextBook Board, Lahore



GEOGRAPHY

Part – I	75 Marks
Part – II	75 Marks
Total	150 Marks

Part-I (Class-IX)	Marks: 75	Time: 2:30 Hours
--------------------------	------------------	-------------------------

Chapter-1 UNDERSTANDING GEOGRAPHY

Definition and Nature, The Principle and Spirit, Purposes, Scope and Main Branches of Geography, Natural and Social Sciences, Relationship of Geography with other subjects, Muslims Contribution to Geography, Role of Muslims in the Development of Physical and Regional Geography, Important Geographical Concepts of the Muslims, Prominent Muslim Geographers of Islamic Period

Chapter-2 EARTH AND ITS BASIC CONCERNS

Introduction, Shapes of the Earth, Size of the Earth, Movements of the Earth, Relation of the Earth, Revolution of the Earth, Reasons of the Different Seasons, Lunar and Solar Eclipse, Latitudes and Longitudes

Chapter-3 THE EARTH

Structure of the Earth, Effects of Mountains on Human Life, Effects of Plateaus on Human Life, Effects of Plains on Human Life, Elements of Change of the Earth Surface, Internal Agents of Change on Earth Surface, Effects of Earthquakes on Human Life

Chapter-4 OCEANS AND SEAS

Introduction, Effects of Oceans and Seas on Human Life, Movements of Oceans, Types of Oceanic Currents, Causes of Oceanic Currents, Effects of Oceanic Currents

Chapter-5 THE ATMOSPHERE

Introduction, Composition of the Atmosphere, Structure of the Atmosphere, Components of Weather and Climate, Factors Effecting Temperature, Temperature Distribution, Atmospheric Pressure, Types of Winds, Clouds and Types of Clouds, Rain Fall and Types of Rain Fall, Impacts of Climate on Human Life

Part-II (Class-X)	Marks: 75	Time: 2:30 Hours
--------------------------	------------------	-------------------------

Chapter-6 HUMAN GEOGRAPHY

Introduction, Evolution of Human Geography, Branches of Human Geography

Chapter-7 POPULATION

Introduction, Factors Effecting Population Distribution, World Population Distribution and Density, Population Growth and Development

Chapter-8 HUMAN SETTLEMENTS

Introduction, Types of Settlements, Factors Effecting Settlements Social Problems of Rural & Urban Settlements

Chapter-9 ENVIRONMENT

Introduction, Types of Environment, Components of Physical Environment, Environmental Problems created by Man

Chapter-10 MAP READING

Importance of Maps, Types of Maps, Directions, Scales, Definition of Scales

Prescribed Book: Geography for Class–(IX–X)

Authors: Sajjad Hussain Sajjad , Kashif Shafique, Sohail Ahmad Majuka

Published by: Azad Book Depot, Lahore

For: Punjab Curriculum and TextBook Board, Lahore



غذا اور غذائیت

60 نمبر

پارٹ-I

60 نمبر

پارٹ-II

30 نمبر

پریکٹیکل

میزان 150 نمبر

وقت 2:00 گھنٹے	پارٹ-I (جماعت نہم)	60 نمبر
----------------	--------------------	---------

باب نمبر 1 غذا اور غذائیت کے علم کا تعارف	غذا اور غذائیت کی تعریف اور ان سے متعلقہ اصطلاحات
باب نمبر 2 توانائی اور غذائی اجزاء	غذائیت کا صحت میں کردار غذا کے کام اچھی اور بری غذائیت کی علامات
باب نمبر 3 متوازن غذا	غذائی اجزاء غذاؤں کی توانائی قدر
باب نمبر 4 غذاؤں کے اجزائے ترکیبی	متوازن غذا کی اہمیت، صحت اور غذائی عادات، متوازن غذا کی ترتیب میں تجویز کردہ مقدار، غذائی گوشوارے
باب نمبر 5 اشیائے خوردنی کی خریداری اور سٹور کرنا	مختلف غذاؤں کے اجزائے ترکیبی اور غذائیت، مختلف غذاؤں کے اجزائے ترکیبی جاننے کی وجوہات
کتاب: غذا اور غذائیت (برائے جماعت نہم)	اشیائے خوردنی کی خریداری، اشیائے خوردنی کو سٹور کرنا
مصنفین: مس سعیدہ غنی، پروفیسر (ریٹائرڈ)، گورنمنٹ کالج آف ہوم اکنامکس، گلبرگ، لاہور	
ایڈیٹر: مسز فرزانہ رضوی، اسسٹنٹ پروفیسر، گورنمنٹ کالج فار ویمن، مدینہ ٹاؤن، فیصل آباد	
ناشر: مسز زبندہ مشکور، سینئر ماہر مضمون، پنجاب ٹیکسٹ بک بورڈ، لاہور	آزاد بک ڈپو، لاہور

وقت 2:00 گھنٹے	پارٹ-II (جماعت دہم)	60 نمبر
----------------	---------------------	---------

باب نمبر 6 غذاؤں کی تیاری اور پکانے کے طریقے	غذاؤں کی تیاری اور پکانے کے طریقے، باورچی خانے میں حفاظتی اقدامات
باب نمبر 7 خاندان اور معاشرے کی غذائیت	معاشرے کے حساس گروہوں کی غذائی ضروریات، معاشرے میں غذائی قلت کی روک تھام
باب نمبر 8 انتظام طعام	انتظام طعام کے اصول، مختلف معاشی طبقات کے لیے فہرست طعام (مینو) بنانا، زندگی کے مختلف ادوار کے لیے فہرست طعام (مینو) بنانا، مختلف تقاریب کے لیے فہرست طعام (مینو) بنانا
باب نمبر 9 میز لگانا اور کھانا پیش کرنا	کھانا پیش کرنا اور میز لگانا، کھانا کھانے کے آداب و طور طریقے
باب نمبر 10 غذاؤں کو محفوظ کرنا	غذاؤں کو محفوظ کرنا، غذاؤں کا خراب ہونا، غذاؤں میں آمیزی اجزاء، عملی کام، فرہنگ
کتاب: غذا اور غذائیت (برائے جماعت دہم) پارٹ-II	
مصنفین: مسز فرزانہ رضوی، اسسٹنٹ پروفیسر، گورنمنٹ کالج فار ویمن، مدینہ ٹاؤن، فیصل آباد	
مس سعیدہ غنی، پروفیسر (ریٹائرڈ)، گورنمنٹ کالج آف ہوم اکنامکس، گلبرگ، لاہور	ناشر: آزاد بک ڈپو، لاہور



MILITARY SCIENCE

Part – I	75 Marks
Part – II	75 Marks
Total	150 Marks

Part-I (Class-IX)	Marks: 75	Time: 2:30 Hours
--------------------------	------------------	-------------------------

PART I – GENERAL

War in General

- a) Cause of War
- b) Conflict of interest between states/societies
- c) Survival of the fittest

War and Diplomacy

- a) War is a continuation of diplomacy
- b) Wars must serve political and diplomatic aims

Military Terminology Application of Science

- a) Period prior to industrial revolution
- b) After industrial revolution
- c) Nuclear era
- d) Future trends

Miscellaneous

- a) Badges of rank in the three services.
- b) Distinctive features of the uniforms of the three services.
- c) Pay-Scales.
- d) Messing/Residential/Medical Facilities

PART II – PAKISTAN ARMY

Functions of the Army Organization

- a) Battalion/Regiment and sub-units of different arms and Services.
- b) Brigade.

Training

- a) Importance of Training.
- b) Training of officers at P.M.A. and other schools.
- c) Training of other Ranks.
- d) Training in Units.
- e) Collective Training

Fire and Movement Patrolling

- a) Aim of Patrolling
- b) Types of Patrolling

Arms and Equipment

- a) Rifles
- b) Machine Guns
- c) Mortars
- d) Guns
- e) Tanks
- f) Armoured Personnel Carriers
- g) Anti-tank Weapons
- h) Wireless Equipment and Codes
- i) Field Telephone
- j) Vehicles including recovery vehicles
- k) Helicopters, including armed helicopters
- l) Light observation aircrafts
- m) Radar
- n) Mines
- o) Anti-tank weapons.
- p) Long Range Rockets

PART III – PAKISTAN NAVY SECTION I

INTRODUCING THE SUBJECT OF THE SEA, SHIPS AND SAILORS

- a) A General Introductory lecture on sea, ships and the men who stay at sea
- b) Names of Oceans & important seas – Different categories of ships: Merchant, Passenger, Fishing and Fighting ships and their mode of propulsion, old and new.
- c) Highlight adventure and thrill experienced at sea

IMPORTANCE OF THE SEA

- a) Uses of the sea-General importance in its effect on weather, rain
- b) Means of transportation and trade
- c) Means of communication between nations
- d) Resource for food
- e) Resource for minerals and metals and chemicals
- f) Use as a battle ground
- g) Recreation and development of human character-swimming, sailing, diving etc

KNOWLEDGE OF THE SEA ENVIRONMENT AND COAST OF PAKISTAN

- Coastline of Pakistan.
- Karachi and small harbours along with coast, new development.
- Off shore sea area, high-seas general description, depths etc.

IMPORTANCE OF SEA TO PAKISTAN

- a) Almost total dependability for imports/exports
- b) Fish catch for own consumption and export.
- c) Recovery of minerals-oil drilling in progress etc
- d) Direct communications with Muslim countries etc
- e) Enemy threat can come from this direction

SECTION II

ORGANIZATION OF PN

- Organization or Naval Headquarters & MHQ
- Organization of Principal support facilities e.g. Dockyard NSD, Wireless Stations Clifton/Landhi, Floating Dock Graving Dock etc
- Organization of Fleet
- Service Structure Rank/Role Structure – Trade/profession

TYPES OF NAVAL CRAFTS & WARFARE TACTICS

- | | | | |
|--|--|---------|-----------|
| a) Petrol Crafts | Gun goats, Torpedo Boats, Missile Boats, Hydro oil Hoover crafts | | |
| b) Mine Sweepers | Ocean going/coastal inshore | | |
| c) Frigates | A/A, A/D, A/S | | |
| d) Destroyers | Brief Idea | | |
| e) Cruisers | Brief Idea | | |
| f) Aircrafts carriers | | | |
| g) Fleet tankers | | | |
| h) Ocean going Tugs/PNS Madadgar (Salvage ships) | | | |
| i) Floating Docks | | | |
| j) Auxiliary vessels | | | |
| k) Submarine | –Ocean going large | –Medium | |
| | –Midgets | | –Chariots |
| l) Landing crafts | –LST | –LCM | –LCVP |

SECTION III

NAVAL ARMAMENT, WEAPON SYSTEM AND BASIC NAVAL WAR TACTICS

- | | | |
|-------------------|---|--------------------|
| a) Naval | –ultra high muzzle Velocity | –Long range |
| | –Flat trajectory | –Dual purpose |
| | –A/A and Anti/ship small caliber; high rate of fire | |
| b) Naval Missile | –Antiship Missile | –AGROC |
| c) Torpedo | –Conventional & Homing | |
| d) Anti-Submarine | –LIMBO-A/S Mortar | –Hedgehog |
| | –Depth Charge | –Homing Torp/ASROC |
| e) Mines | –Contact | –Magnetic |
| | –Acoustic | –Pressure |

SECTION IV**SIMPLE EXPLANATION OF MARITIME STRATEGY**

- a) Offensive Component;
 - 1. Submarines
 - 2. SSG Navy
 - 3. Mining of Enemy water
- b) Defensive
 - 1. Maritime Reconnaissance
 - 2. Helicopter/Destroyer Hunter Killer operation
 - 3. Deployment of surface Fleet
- c) Harbour Defence/Boom Defence
- d) Qasim Fort, Battery (Coastal)
- e) Surveillance centres-Radar Early Warning
- f) Defensive Mining
- g) Beach/Coastal obstructions to seaward landings
- h) Gunboat, deployment-Anti OSA Role
- i) Hydrofoils Deployment-Anti ship Role

SECTION V**INTRODUCTION TO NAVAL EQUIPMENT**

- a) Diving Suit/Deep diving
- b) Diving Equipment-Skin Diving
- c) Depth change
- d) Radar
- e) Periscope
- f) Sonar

Part-II (Class-X)**Marks: 75****Time: 2:30 Hours****PART 1 – GENERAL****Leadership**

- a) Definition of Leadership
- b) Qualities of a good Leader
- c) Leadership Traits
- d) How Leadership can be developed
- e) Selected Biography of one Commander

Military Geography

- a) Pakistan
- b) India
- c) Afghanistan

Military History

- a) History of war on Land, Air & Sea
- b) Evolution of methods of warfare
- c) Study of one campaign
- d) Some principles of war

Discipline and Morale

- a) The stresses of war
- b) The role of Discipline and Morale
- c) The role of leadership, training, motivation etc. in promoting Discipline and Morale

Military Methodology

- a) Appreciation
- b) Battle Procedure
- c) System of Giving Orders

Theorists of War

- a) Ancient theorists
- b) Modern theorists
- c) Communist theorists

Security and Intelligence

- a) Psychological Warfare aimed at the minds of the enemy in order to strike at his morale
- b) The role of motivation and dissemination of information to counter Psychological Warfare
- c) Security of Personnel against subversion
- d) Security of information against espionage
- e) Security of material against sabotage

- f) Acquisition of information/intelligence about enemy:
 - (i).Strength/weaknesses
 - (ii).Dispositions
 - (iii).Plans Intention
- g) Methods employed to gain information about the enemy and to deny the same to the enemy

Nuclear/Biological and Chemical Warfare

- a) Fission and Fusion
- b) Effects of nuclear explosion – blast, heat and radiation. Radio-active fall-outs and their effects
- c) Use of germs and bacteria in warfare; protective measure
- d) Use of chemical agents such as gases etc. as a lethal means in war, protective measures

PART II - PAKISTAN ARMY

Operations of War

- a) Attack
- b) Defence

Raids and ambushes

- a) Raids
- b) Ambushes

Camouflage

- a) Why things are visible
- b) Camouflage against ground observer
- c) Camouflage against air

Obstacles

- a) Obstacles a barrier to movement
- b) Natural obstacles
- c) Artificial obstacles
- d) How to overcome obstacles

Map Reading

- a) Conventional Signs
- b) Scales
- c) Grids
- d) Representation of Relief
- e) Directions
- f) Use of maps
- g) Recognition of Stars

PART III – PAKISTAN NAVY SECTION I

GEOGRAPHICAL IDEA OF SEA AND LAND SURFACE OF EARTH

- a) Areas covered by sea and land 7/10ths surface is covered by water
- b) Comparison of weather conditions of both-rain storms, clams
- c) Ocean depths, currents & streams
- d) Botanical and biological life in the sea

HIGH IMPORTANCE OF THE INDIAN OCEAN

- a) General description of India Ocean-Arabian sea, Oil Gulf, Red sea, Other parts
- b) Mostly inhabited by Muslims
- c) Passage of very important oil cargo through Indian Ocean
- d) Most of the Third World-Afro-Asian block countries situated on the periphery of Indian Ocean
- e) Military uses of Indian ocean by big powers

ROLE OF THE SEA IN WORLD HISTORY AND DEVELOPMENT OF NATIONS

- a) General description of maritime achievements and supremacy of nations
- b) Ancient times-Phoenicians Chinese, Pre-Islamic Arabs, Romans
- c) Middle Ages-Muslims, Turkey and Spain, Portugal Holland
- d) Advantages and qualities imbibed by sea faring peoples
- e) Economic and commercial prosperity facilitated by sea
- f) Comparison between coastal and land locked states

ASSOCIATION OF MUSLIM WITH THE SEA AND THEIR ROLE IN DEVELOPMENT OF SEA CRAFT

- a) With the rise of Islam spirit of adventure and learning brought Muslims closer to sea
- b) Early sea expeditions by Muslims – times of Umar. Muawiys and other campaigns & conquests in Eastern Mediterranean Islands Indian Ocean. West coast of India. Western Mediterranean Spain etc. Persian Gulf, Red sea
- c) Emphasis on campaigns of Muhammad Bin Qasim and Tariq bin Zaid. Ibne Qasim arrived by land but reserve support arrived by sea expedition; he also left by sea. Tariq made amphibious landing and burnt the boats
- d) Development of Navigation and sea craft by Muslims during 8th to 16th century
- e) Navigation basically dependent upon geography Mathematics and Astronomy which were highly developed by Muslims. In addition Muslims developed optics, sail making and boat building
- f) Indian Ocean and Mediterranean Sea vastly influenced by Muslims. Muslim settlements in coastal areas and Islands spread throughout seas
- g) Sea trade between Persian Gulf and North Africans passing round the Cap of Good Hope was in progress long before Vascoda Gama passed that way. Even Vascoda Gama had a Muslim Cartographer & navigator for his voyage
- h) Importance crew members including a Navigator of Columbus were Muslims on his voyage to America
- i) Recent evidence unearthed that Muslims from North Africa were sailing to America in century hundred years before Columbus reached there

LIFE DEEDS OF A GREAT MUSLIM NAVAL PERSONALITY

- a) Life of Khairuddin Barbarossa
- b) His objectives of saving Moorish Muslims from Spanish persecution of preventing Christian powers conquest of North African Muslim states and of wresting, maritime control of Mediterranean from Spain

DETAILED FUNCTIONS OF THE NAVY SECTION II
--

- a) General surveillance and supervision of our cost and territorial waters to prevent irregularities, encroachments etc. and to exert our own right of seabed exploitation, fisheries etc
- b) Survey of our coast and waters. Work done by PNS Zulfiqar
- c) Assist the Government in development of ports and harbours Bandur Qasim Guadars Ormara etc
- d) Aid to Civil Government in management and operations of Harbour and coastal facilities during strikes/disturbances running of Karachi port Trust, manning tug boats pilot duties etc
- e) Disaster Relief work, during floods, heavy rains etc
- f) Salvage/Diving work, services rendered by PN Divers at Davns, Barrages Harbour operations
- g) Rescue at sea-towing of Pakistan or foreign Ships stranded in our waters, rescue of cress etc. during emergencies on shops at sea off or coast
- h) Provide logistic and repair/maintenance facilities of PN Dockyard to friendly Navies, Iran Arab states, Egypt have used our services
- i) Administrative operational and training assistance to friendly and Muslim countries – training of their naval officers and men helping them in building up their navies
- j) Cooperation with Army and Air force-training, survival and rescue at sea SSG waterman ship.
- k) Assistance in development of Pak Merchant Navy – Training administration etc
- l) Promotion of Pakistan's policies in development of friendly relations with foreign countries – good will cum operational visits, description of major visits to Oil Gulf, Red Sea, South Indian Ocean, East Africa, South East Asia

SECTION VII SOME HISTORICAL SEA ENGAGEMENTS AND OPERATIONS

- a) Battle of Preveza between Ottaman and Combined Spanish Italian fleets which decide maritime supremacy of Turks in the Miditeranean
- b) Inadequacy of sea power of Mughals in India – a reason of their downfall. Attempts of Build up Sea power by Hyder Ali and Tipu Sultan. Dwarka Operation by Pakistan Navy in 1965. Sinking of Indian Frigate by PN submarine in 1971
- c) Campaign of Gallipoli against the Turks-failure of British
- d) Normandy landings during World War II
- e) Japanese attack on Pearl Harbour

PART IV PAKISTAN AIR FORCE

- | | |
|--|--|
| 1 Function of the Air Force | 2 Training |
| 3 Organization | 4 Development of Air Power |
| 5 Types of Aircraft | 6 Armament |
| 7 Air Defense | 8 Bomber Force |
| 9 Tactical Air Force | 10 Maritime Air Force |
| 11 Air Transport Force | 12 Air Reconnaissance |
| 13 Effectiveness of Air Power in
Different types of Terrain | 14 Japanese Surprise Attack on
Pearl Harbour. |
| 15 Battle of 'D' —Day. 6 th June, 1944 | 16 Arab-Israel Wars |

Prescribed Book: Military Science for Class—(IX–X)
Authors: Lt. Cdr. Zahur Ahmad , Major Muhammad Ali , Flt. Lt. Ghulam Yasin Butt , P.A.F. Academy, Risalpur
Published by: Malik Siraj Din & Sons, Kashmiri Bazar, Lahore.
 For: NWFP Textbook Board, Peshawar.



تاریخ پاکستان

75 نمبر

پارٹ-I

75 نمبر

پارٹ-II

میزان 150 نمبر

وقت: 2:30 گھنٹے	پارٹ-I (جماعت نہم)	75 نمبر
-----------------	--------------------	---------

1. وادی سندھ کی قدیم تہذیب
2. دیدوں کا آخری دیدار
3. ہندو راجاؤں کی حکومت کو دور
4. ہندوستان میں مسلمانوں کی آمد
5. دور انتشار
6. ہندوؤں میں مسلمانوں حکمرانوں کی وسعت پسندی
7. غیاث الدین تغلق
8. سلاطین دہلی کی حکومت زوال کی طرف
9. ہندوستان میں مغلیہ حکومت کی ابتدا (ظہیر الدین بابر)
10. نصیر الدین ہمایوں
11. شیر شاہ سوری
12. مغلیہ حکومت کا استحکام (جلال الدین محمد اکبر)
13. نوری الدین محمد جہانگیر
14. شہاب الدین محمد شاہ جہان
15. اورنگ زیب عالمگیر
16. بادشاہوں کے دور میں تہذیب اور علم فنون

وقت: 2:30 گھنٹے	پارٹ-II (جماعت دہم)	75 نمبر
-----------------	---------------------	---------

17. ہندوستان میں یورپی اقوام کی آمد
18. مذہبی و اخلاقی تحریکیں
19. سرسید احمد خان
20. تقسیم بنگال
21. مسلم لیگ کا قیام اور جداگانہ انتخاب
22. ہندوؤں مسلم اتحاد کی کوششیں
23. آئینی مسائل اور ہندو مسلم اختلافات
24. کانگریسی وزارتیں
25. تحریک قیام پاکستان
26. حصول پاکستان
27. آزادی کے فوراً بعد پاکستان کی مشکلات
28. پاکستان کا ابتدائی دور (اگست 1947 تا اکتوبر 1958)
29. ایوب خان کا دور حکومت
30. ذوالفقار علی بھٹو
31. جنرل محمد ضیاء الحق
32. مشاہیر پاکستان

کتاب: تاریخ پاکستان (برائے جماعت نہم و دہم) پارٹ I-II

مصنفین: پروفیسر اکرام علی ملک، قمر عباس، نواز علی بیگ

پبلشر: آئیڈیل بک ہاؤس، انارکلی، لاہور۔

برائے: پنجاب ٹیکسٹ بک بورڈ، لاہور



ENGLISH (Literature)

Part-I (Class-IX)	Marks: 75	Time: 2:30 Hours
--------------------------	------------------	-------------------------

1. Poetry, 50% of Syllabus
More poems for young people. Oxford University Press.
Page No. 1 to 21.
2. Essay and Short Stories, 50% of the syllabus (Short Stories only) Anthology
of Essays and Short Stories. West Pakistan Publishing Co. Ltd.
Page No. 1 to 45
3. Play
The Winslow Boy by Terence Rattigan Modern Plays for Students.

Part-II (Class-X)	Marks: 75	Time: 2:30 Hours
--------------------------	------------------	-------------------------

1. Poetry, 50% of Syllabus
Page No. 22 to 50
2. Essay and Short Stories, 50% of the syllabus (Essay only) Anthology of
Essays and Short Stories. West Pakistan Publishing Co. Ltd.
Page No. 46 to 91
3. Novel
Great Expectations by Charles Dickens.
The Ideal House 194, Anarkali, Lahore



اردو (اختیاری)

75 نمبر

پارٹ-I

75 نمبر

پارٹ-II

میزان: 150 نمبر

وقت: 2:30 گھنٹے	پارٹ-I (جماعت نہم)	75 نمبر
-----------------	--------------------	---------

حصہ نثر:	سرگزشت آزاد بخت پادشاہ کی	صفحہ نمبر 7	ابتدائی سائنس	صفحہ نمبر 102
غزل:	میر درد	صفحہ نمبر 223	نواب مرزا خان داغ	صفحہ نمبر 236
نظم:	محسن کا کو روی	صفحہ نمبر 182	عبادت صبح تا اکبر الہ آبادی رباعیات	صفحہ نمبر 202
گرامر:	تشبیہ، استعارہ، مجاز مرسل، کنایہ، مطلع، مقطع، قافیہ رادیف، صنعت تضاد، صنعت تکرار، حسن تعلیل، مراعات النظر اور صنعت تجنیس			

وقت: 2:30 گھنٹے	پارٹ-II (جماعت دہم)	75 نمبر
-----------------	---------------------	---------

حصہ نثر:	کلید کامیابی	صفحہ نمبر 104	خطوط از محمد علی ادولوی	صفحہ نمبر 178
غزل:	علامہ اقبال	صفحہ نمبر 238	ناصر کاظمی	صفحہ نمبر 247
نظم:	علامہ اقبال	صفحہ نمبر 203	ناصر کاظمی	صفحہ نمبر 219
مضمون نگاری:	علمی و ادبی اور سوانحی موضوعات			

مجوزہ کتاب: بستان ادب (اردو اختیاری)

مصنفین: پروفیسر طلعت نایاب زیدی، پروفیسر امجد علی شاکر، اشتیاق احمد

ناشر: ویسٹ پاک پبلشنگ لمیٹڈ، لاہور۔



آرٹ اینڈ ماڈل ڈرائنگ

40 نمبر	پارٹ-I
40 نمبر	پارٹ-II
70 نمبر	پریکٹیکل

میزان: 150 نمبر

وقت: 1:30 گھنٹے	پارٹ-I (جماعت نہم)	40 نمبر
-----------------	--------------------	---------

(1) فائن آرٹس Fine Arts

1.1 آرٹ کی اقسام	1.2 فن مصوری	1.3 ڈرائنگ
1.4 مصوری اور ڈرائنگ میں فرق	1.5 ماڈل ڈرائنگ	1.6 آرٹ اور ڈرائنگ میں استعمال ہونی والی اشیاء
1.7 پنسل	1.8 برش	1.9 کاغذ
1.10 ربڑ	1.11 رنگ گھولنے کی پلیٹ	1.12 رنگ گھولنے کی پلیٹ
1.13 رنگ	1.14 ڈرائنگ بکس	1.15 ڈرائنگ بورڈ

(2) آرٹ کے بنیادی عناصر اور اصول Basic Elements and Principles of Art

2.1 ترکیبی عناصر	2.2 جمالیاتی عناصر	2.3 ترکیبی عناصر کی تفصیل
2.4 جمالیاتی عناصر کی تفصیل		

(3) سٹل لائف یا ماڈل ڈرائنگ Still Life or Model Drawing

3.1 ماڈل کو ڈرائنگ بنانے کے لیے تیار کرنا	3.2 صراحی اور پیالے کی ماڈل ڈرائنگ بنانا	3.3 ماڈل کے خاکے میں شیڈ کرنا
3.4 پریکٹیکل ورک	3.5 ماڈل ڈرائنگ	3.6 مشقی سوالات

(4) کمپوزیشن Composition

4.1 کمپوزیشن کی تعریف	4.2 قدرتی مناظر	4.3 اجزائے منظر کو ترتیب دینا
4.4 رنگ کرنا	4.5 رنگ کرنے کے مراحل	4.6 مختلف مناظر
4.7 مشقی سوالات		

(5) ڈیزائن Design

5.1 ڈیزائن کی تشریح	5.2 ڈیزائن کے ترکیبی عناصر	5.3 ڈیزائن کے اصول
5.4 تکرار اور تبادل	5.5 تبدل اور شعاع	5.6 ٹیکسٹائل ڈیزائن
5.7 بارڈر ڈیزائن	5.8 ماسٹیل ڈیزائن	5.9 ڈیزائن چھاپنے کے طریقے
5.10 سٹینسل سے چھپائی کرنا	5.11 ڈیزائن	5.12 سپرے پرنٹنگ
5.13 بلاک یا ٹیپ سے چھپائی کرنا	5.14 مختلف ڈیزائن	

وقت 1:30 گھنٹے	پارٹ-II (جماعت دہم)	40 نمبر
----------------	---------------------	---------

(6) فنون لطیفہ کی تاریخ History of Art		
6.1 مغل بادشاہ اور فنون لطیفہ	6.2 پاکستانی فنون لطیفہ	6.3 فن خطاطی
(7) وادی سند کی تہذیب Indus Vally Civilization		
7.1 موہنجوداڑو	7.2 ہڑپہ	7.3 شہری منصوبہ بندی
7.4 مہریں اور سکے	7.5 کوزہ کری اور کھلونے	7.6 مجسمہ سازی
7.7 زیورات		
(8) گندھارا آرٹ Gandhara Art		
8.1 مجسمہ سازی	8.2 گندھارا کا فن تعمیر	8.3 منصوبہ بندی
8.4 اسٹوپا	8.5 اینٹ، چونے اور لکڑی کا استعمال	مشقی سوالات
(9) پاکستان کا فن تعمیر Architecture of Pakistan		
پس منظر		
9.1 مغلوں سے پہلے کا فن تعمیر		
(i) ملتان کا طرز تعمیر	(ii) سندھ کا طرز تعمیر	
9.2 مغلیہ دور کا طرز تعمیر		
(i) شاہی قلعہ	(ii) بادشاہی مسجد	(iii) شالامار باغ
(iv) مقبرہ جہانگیر	(v) مسجد وزیر خاں	(vi) جامعہ مسجد ٹھٹھہ
(vii) مسجد مہابت خان		

LIST OF PRACTICALS FOR CLASS-X (PART-II)

Practical has three sections, candidate may choose any one from these. Only outline knowledge is expected for general understanding and appreciation of our heritage.

- (a) Drawing from life on still life Test of Drawing & painting
OR
(b) Composition (Expressional Test of Imagination painting)
OR
(c) Design (Two-dimensional) Test of Imagination.

مجوزہ کتاب: آرٹ اینڈ ماڈل ڈرائنگ (برائے پنجاب ٹیکسٹ بک بورڈ، لاہور)

مصنفین: محمد صدیق وقار

ناشر: آزاد بک ڈپو اردو بازار، لاہور۔



فارسی

75 نمبر

پارٹ-I

75 نمبر

پارٹ-II

میزان: 150 نمبر

وقت: 2:30 گھنٹے	پارٹ-I (جماعت نہم)	کل نمبر: 75
-----------------	--------------------	-------------

سوال نمبر 1: معروضی حصہ کا وقت 20 منٹ ہو گا جس میں 15 سوالات 15 نمبر کے ہوں گے تمام سوالات حل کرنے ہوں گے ہر سوال ایک نمبر کا ہو گا۔

انشائیہ طرز

انشائیہ حصہ کا پرچہ اول اور حصہ دوم پر مشتمل ہو گا جس کے کل نمبر 60 ہوں گے جبکہ وقت 2 گھنٹے 10 منٹ ہو گا

حصہ اول

حصہ اول میں سوال نمبر 2, 3 اور 4 (چھ سوالات کے مختصر جوابات) (12+12+12) نمبر

حصہ دوم

14 نمبر

سوال نمبر 5: پیرا گراف کا اردو میں ترجمہ

6+4 نمبر

سوال نمبر 6: اشعار کا اردو میں ترجمہ اور تشریح

وقت: 2:30 گھنٹے	پارٹ-II (جماعت دہم)	کل نمبر: 75
-----------------	---------------------	-------------

معروضی طرز

سوال نمبر 1: معروضی حصہ کا وقت 20 منٹ ہو گا جس میں 15 سوالات 15 نمبر کے ہوں گے تمام سوالات حل کرنے ہوں گے ہر سوال ایک نمبر کا ہو گا۔

انشائیہ طرز

انشائیہ حصہ کا پرچہ اول اور حصہ دوم پر مشتمل ہو گا جس کے کل نمبر 60 ہوں گے جبکہ وقت 2 گھنٹے 10 منٹ ہو گا

حصہ اول

حصہ اول میں سوال نمبر 2, 3 اور 4 (چھ سوالات کے مختصر جوابات) (12+12+12) نمبر

حصہ دوم

14 نمبر

سوال نمبر 5: پیرا گراف کا اردو میں ترجمہ

6+4 نمبر

سوال نمبر 6: اشعار کا اردو میں ترجمہ اور تشریح

مجوزہ کتاب: فارسی ادب (نہم و دہم)
مصنفین/ایڈیٹر: ڈاکٹر خالدہ آفتاب، محمد خان کلیم، غلام معین الدین نظامی، نوازش علی شیخ
پبلشر: آزاد بک ڈپو، لاہور



عربی

کل نمبر: 75

پارٹ-I (جماعت نہم)

وقت: 2:30 گھنٹے

معروضی طرز

معروضی حصہ کا وقت 20 منٹ ہو گا جس میں 15 سوالات 15 نمبر کے ہوں گے تمام سوالات حل کرنے ہوں گے ہر سوال ایک نمبر کا ہو گا۔

انشائیہ طرز

- سوال نمبر 2: عربی میں جوابات
- سوال نمبر 3: جملوں کا عربی میں ترجمہ
- سوال نمبر 4: (الف) ترتیب دے کر جملے بنانا
- (ب) جملوں پر اعراب لگانا
- (ج) واحد جمع
- سوال نمبر 5: اردو ترجمہ (جز)
- سوال نمبر 6: اردو ترجمہ (اشعار)
- سوال نمبر 7: خط یا درخواست
- 10 نمبر
- 10 نمبر
- 03 نمبر
- 02 نمبر
- 05 نمبر
- 10 نمبر
- 10 نمبر
- 10 نمبر

کل نمبر: 75

پارٹ-II (جماعت دہم)

وقت: 2:30 گھنٹے

معروضی طرز

معروضی حصہ کا وقت 20 منٹ ہو گا جس میں 15 سوالات 15 نمبر کے ہوں گے تمام سوالات حل کرنے ہوں گے ہر سوال ایک نمبر کا ہو گا۔

انشائیہ طرز

- سوال نمبر 2: عربی میں جوابات
- سوال نمبر 3: جملوں کا عربی میں ترجمہ
- سوال نمبر 4: (الف) ترتیب دے کر جملے بنانا
- (ب) جملوں پر اعراب لگانا
- (ج) واحد جمع
- سوال نمبر 5: اردو ترجمہ (جز)
- سوال نمبر 6: اردو ترجمہ (اشعار)
- سوال نمبر 7: خط یا درخواست
- 10 نمبر
- 10 نمبر
- 03 نمبر
- 02 نمبر
- 05 نمبر
- 10 نمبر
- 10 نمبر
- 10 نمبر

المطالعة العربية (مرآة دہم)
پروفیسر ڈاکٹر ظہور احمد اظہر

آزاد بک ڈپو اردو بازار، لاہور

المطالعة العربية (مرآة دہم)
پروفیسر ڈاکٹر ظہور احمد اظہر

فاران پبلی کیشنز، لاہور

مجوزہ کتاب:
مصنفین/ایڈیٹر:

ناشر:



پنجابی

پارٹ:-II (جماعت دہم)	پارٹ:-I (جماعت نہم)
ٹیکسٹ بک حصہ نثر: سبق نمبر 8 تا 14 (صفحہ نمبر 43 تا 88)	ٹیکسٹ بک حصہ نثر: سبق نمبر 2 تا 7 (صفحہ نمبر 9 تا 42)
(غازی علم الدین شہید تاحمت کرے انسان تے۔۔)	(ذات نبی خاتم النبیین صلی اللہ علیہ وسلم علی الہ واصحابہ وسلم دی رحمت جھڑیاں تاہن کوئی دیوالبدا)
ٹیکسٹ بک حصہ نظم: نظم 16 تا 30 (صفحہ نمبر 120 تا 149)	ٹیکسٹ بک حصہ نظم: نظم 1 تا 15 (صفحہ نمبر 90 تا 119)

وقت: 2:30 گھنٹے	نصاب برائے پارٹ-I (جماعت نہم)	کل نمبر: 75
-----------------	-------------------------------	-------------

1-	حصہ نثر	25 نمبر
2-	حصہ نظم	15 نمبر
3-	خط / کہانی	10 نمبر
4-	گرائمر	15 نمبر
5-	سپلیمنٹری ریڈنگ	10 نمبر
میزان:- 75 نمبر		

وقت: 2:30 گھنٹے	نصاب برائے پارٹ-II (جماعت دہم)	کل نمبر: 75
-----------------	--------------------------------	-------------

معروضی طرز

- سوال نمبر 1: سارے سوالاں دے جوابات دتی گئی جوابی کاپی تے لکھو۔ ہر سوال دے 4 (چار) ممکنہ جواب A, B, C, D تے دتے گئے نیں جہڑے جواب نوں تسیں درست سمجھو جوابی کاپی تے ایس سوال نمبر دے سامنے جز 15 نمبر
- A, B, C, D تے سامنے دتے گئے دائریاں وچ اک دائرے نوں پین یا مار کر دی سیاہی نال بھرو۔

انشائیہ طرز

حصہ اول

- سوال نمبر 2: تھلے دتے گئے سوالاں وچوں کسے ستاں (7) سوالاں دے مختصر جوابات دیو۔ 14 نمبر
- سوال نمبر 3: پنج نقطیاں دے واحد دے جمع تے جمع دے واحد لکھو۔ 05 نمبر
- سوال نمبر 4: پنج نقطیاں دے مذکر دے مونث تے مونث دے مذکر لکھو۔ 05 نمبر
- سوال نمبر 5: چھ نقطیاں دے جملے لکھو۔ 06 نمبر

حصہ دوم

- سوال نمبر 6: اک عبارت دی سوکھی پنجابی وچ تشریح، سبق دانان تے لکھاری کاٹاں وی لکھو۔ 8+1+1 نمبر
- سوال نمبر 7: کسے اک جز دی پنجابی وچ تشریح کرو تے شاعر دانان وی لکھو۔ 9+1 نمبر
- سوال نمبر 8: کسے اک عنوان تے پنجابی وچ بھرواں مضمون لکھو۔ 10 نمبر
- نوٹ:- حصہ گرائمر ٹیکسٹ بک میں سے دیا جائے گا۔

مجوزہ کتاب: پنجابی ادب تے زبان

مصنفین: سید اختر حسین اختر، ڈاکٹر ناہید شاہد

ناشر: پاک ایمریل بک ڈپو، لاہور



ایڈوانس اسلامک سٹڈیز (اختیاری)

پارٹ-I	75 نمبر
پارٹ-II	75 نمبر
میزان 150 نمبر	

وقت: 2:30 گھنٹے	پارٹ-I (جماعت نہم)	75 نمبر
-----------------	--------------------	---------

القرآن	25 نمبر
الاحادیث	10 نمبر
سیرۃ طیبہ	30 نمبر
قواعد عربی	10 نمبر
میزان:	75 نمبر

نصاب کی تقسیم:	(i) القرآن: آیت نمبر 1 تا 10	(ii) احادیث: حدیث نمبر 1 تا 12
	(iii) سیرۃ طیبہ	(iv) قواعد عربی

وقت: 2:30 گھنٹے	پارٹ-II (جماعت دہم)	75 نمبر
-----------------	---------------------	---------

القرآن	25 نمبر
الاحادیث	10 نمبر
تعلیمات اسلام	30 نمبر
قواعد عربی	10 نمبر
میزان:	75 نمبر

نصاب کی تقسیم:	(i) القرآن: آیت نمبر 11 تا 19	(ii) احادیث: حدیث نمبر 13 تا 25
	(iii) تعلیمات اسلام	(iv) قواعد عربی

سیرت طیبہ

(I- رائے جماعت بہم پارٹ)

1- افضل الرسل حضرت محمد خَاتَمُ النَّبِيِّينَ صَلَّى اللَّهُ عَلَيْهِ وَسَلَّمَ -

الف:

رسالت - مہموم، منصب اور اسکی عظمت

ب:

انبیاء ﷺ کی تبلیغی کوششیں خاص کر حضرت نوح ﷺ، حضرت ابراہیم ﷺ، حضرت موسیٰ ﷺ اور حضرت عیسیٰ ﷺ کی مساعی کا مختصر تذکرہ۔

الاحادیث:

بسم الله الرحمن الرحيم۔

- 1- اسمہ، الحکمة، محافہ اللہ۔
- 2- اول ما يحاسب به العبد الصلوة۔
- 3- الصوم لی وانا جزی بہ۔
- 4- اتقوا النار، وله بشة، عمة۔
- 5- الماهر بالقرآن مع السفارة الكرام البررة۔
- 6- آية المنافق ثلاث و ان صام او صلى و زعم انه مسلم۔ اذا فتن خان و اذا حدث كذب و اذا وعد اخلف۔
- 7- ان اكمل المومنين ايمانا احسنهم خلقا۔
- 8- الحياء من الايمان۔
- 9- من سمع ان يسقط الله، ذقه، انا ينسأله من، اياه فليصا، رحمه۔
- 10- ان الدال على الخير كفعله۔
- 11- خير الناس من انفعهم للناس۔
- 12- ان من اجلال الله اكرام ذى الشبهة المسلم۔
- 13- ليس منا من لم يرحم صغيرنا ولم يوقر كبيرنا۔
- 14- من لم يشكر الناس لم يشكر الله۔
- 15- من لا يرحم لا يرحم۔
- 16- ما آمن بي من مابات شعبان و جاره جائع۔
- 17- اولى الناس من بدء هم بالسلام۔
- 18- دماءكم و اموالكم عليكم حرام۔
- 19- عن وائله اس الا سقع قال يا رسول الله خَاتَمُ النَّبِيِّينَ صَلَّى اللَّهُ عَلَيْهِ وَسَلَّمَ ما العصبية؟ قال ان تعين قومك على الظلم۔
- 20- من فتح علم، نفسه باب مسئلة فتح الله عليه باب فقه۔
- 21- السعيد من وعظ بغيره۔
- 22- لا يدخل الجنة من، في، قلبه مثقال ذرة من، كبر۔
- 23- اياكم والحسد فان الحسد ياكل الحسنات كما ياكل النار الحطب۔
- 24- المسلم وخواه المسلم۔ ما لظمه ولا يحذله ولا يغتابه ولا يحزنه ولا يحرمه۔
- 25- مثل المومنين في توادهم و يراحهم و تعاطفهم مثل الجسد اذا شتى مته عضو تداعى له سائر الجسد بالسهر والحمى۔

(II- رائے جماعت دہم پارٹ)

- 1- توحيد (تعريف، توحيد بر اسلام کا زور، توحيد و سرك کا فرق اور کردار سازى میں توحيد کا حصہ)
- 2- اطاعت رسول الله خَاتَمُ النَّبِيِّينَ صَلَّى اللَّهُ عَلَيْهِ وَسَلَّمَ اور اسکی اہمیت
- 3- طہارت و پاکیزگی،
- 4- علم کی یرغیب
- 5- عدل
- 6- جہاد
- 7- اکل حلال
- 8- عفت و حیا
- 9- سماجی انصاف
- 10- فرض شناسی
- 11- اسلامی عبادات کی امتیازی خصوصیات
- ج- حضرت محمد خَاتَمُ النَّبِيِّينَ صَلَّى اللَّهُ عَلَيْهِ وَسَلَّمَ کا تکمیل فریضہ رسالت اور خیم نبوت

- 1- خلق عظم
- الف- حضرت محمد خاتم النبیین صلی اللہ علیہ وسلم کا پاکیزہ کردار
- 1- عہد طفولیت
- 2- عہد شباب
- ب- اخلاق نبوی خاتم النبیین صلی اللہ علیہ وسلم کا پاکیزہ کردار
- 1- سادگی اور بے تکلفی
- 2- اپنا کام آب کرنا
- 3- دوسروں کے کام آنا
- 4- شفقت، بچوں، خادموں اور جانوروں پر
- 5- حسن سلوک، گھر والوں کے ساتھ، ساتھیوں کے ساتھ، دسمنوں کے ساتھ
- 6- مساوات
- 7- عزم و استقلال

(I) اے جماعت ہم بارٹ (I)

قواعد عربی:

- 1- کلمہ و اقسام کلمہ
- 2- اسم نکرہ و معرفہ
- 3- مذکر و مؤنث
- 4- مؤنث نفطہ و معنوی
- 5- مفرد، تثنیہ و جمع
- 6- جمع کی اقسام (جمع معکسر و سالم)

(II) اے جماعت دہم بارٹ (II)

قواعد عربی:

- 1- صیغہ
- 2- اسم صمیر کی اقسام: i- اسم صمیر متصل ii- اسم صمیر متفصل اور ان کی اقسام
- 3- فعل کی قسمیں (فعل ماضی، مضارع، امر)
- 4- مرکب اور اس کی اقسام
- 5- فعل لازم، فعل متعدی
- 6- حروف
- 7- ہمزہ استعہام

نام کتاب: اسلامیات اختیاری

- مولفین:
- 1- ڈاکٹر قاضی مجیب الرحمن الہری 2- علامہ مرزا یوسف حسن
- 3- پروفیسر رشید احمد 4- پروفیسر عبدالحی انور

بایپر:

1- کامران پبلیشرز، لاہور 2- فاضل مقبل اینڈ سبر، لاہور



صحت و جسمانی تعلیم (ہیلتھ اینڈ فزیکل ایجوکیشن)

پارٹ-I	60 نمبر
پارٹ-II	60 نمبر
پریکٹیکل	30 نمبر

میزان: 150 نمبر

وقت: 2:00 گھنٹے	پارٹ-I (جماعت نہم)	60 نمبر
پہلا باب:	تعلیم جسمانی کی تعریف	- مقاصد
دوسرا باب:	حرکات	- جسمانی تعلیم کا صحت سے تعلق
تیسرا باب:	تعلیمی جنسٹک	- تعلیمی جنسٹک کی اہمیت اور جدید رجحانات
چوتھا باب:	قامت	
پانچواں باب:	منظم کھیلیں	1- والی بال 2- بیڈمنٹن (قوانین اور بنیادی مہارتیں)
چھٹا باب:	اتھلیٹکس کے قوانین اور بنیادی مہارتیں	1- 100 میٹر دوڑ 2- 200 میٹر دوڑ 3- گولہ ہٹ کرنا
ساتواں باب:	علم الصحت اور اسکی وسعت	- عوام کی صحت کے مسائل
آٹھواں باب:	شخصی حفظان صحت	
نواں باب:	جسم کے حرکاتی کل پرزے	(الف) جسمانی جوڑ (ب) نظام عضلات

وقت: 2:00 گھنٹے	پارٹ-II (جماعت دہم)	60 نمبر
پہلا باب:	جسمانی تعلیم	(الف) فزیکل فٹنس اور اسکی اہمیت (ب) اچھے کھلاڑی کے اوصاف
دوسرا باب:	تفریحی اور چھوٹے رقبے کے کھیل	
تیسرا باب:	قامتی نقائص کی اصلاحی ورزشیں	
چوتھا باب:	کھیلیں	- کھیلوں کے قوانین اور مہارتیں (الف) ہاکی (ب) ٹیبل ٹینس
پانچواں باب:	اتھلیٹکس	- ڈسکس تھرو، لمبی چھلانگ (لانگ جمپ) - 100x4 ڈاک دوڑ (ریلے ریس)
چھٹا باب:	تفریحی مشاغل	(الف) کیمپنگ (ب) ہائیکنگ
ساتواں باب:	معاشرے کی صحت	گھر، سکول اور معاشرے کی صحت
آٹھواں باب:	غذائیت	
مجوزہ کتاب:	صحت و جسمانی تعلیم (ہیلتھ اینڈ فزیکل ایجوکیشن)	برائے پنجاب ٹیکسٹ بک بورڈ، لاہور۔
مصنفین:	مس شاہدہ خانم، محمد اشرف چوہدری، اسلم حیات وٹو، مس بشری شاہد	
ایڈیٹر:	رانا عبدالشکور، نانکھ صدف	ناشر: مکتبہ حریت، لاہور



COMMERCIAL GEOGRAPHY

Part – I	75 Marks
Part – II	75 Marks
Total	150 Marks

Part-I (Class-IX)	Marks: 75	Time: 2:30 Hours
--------------------------	------------------	-------------------------

SECTION-I	MEANING AND SCOPE OF COMMERCIAL GEOGRAPHY Definition, Scope and Importance of Commercial Geography
SECTION-II	BASIC CONCEPTS Geographical Concepts relevant to Commercial Activity, Location, Distribution, Interaction
SECTION-III	BASIS OF COMMERCIAL ACTIVITY Trade, Transportation, Financing, Ware-Housing, Insurance, Communications
SECTION-IV	COMMERCIAL RESOURCES OF PAKISTAN Locational Attributes of Pakistan, Commercial Resources of Pakistan, Agricultural Resources, Crops, Forests, Livestock and Livestock Products, Hides and Skins, Fisheries, Poultry, Mineral Resources, Industrial Resources, Power Resources.
SECTION-V	AGRICULTURE – PRODUCTION AND DISTRIBUTION Major Crops and their distribution pattern, Wheat, Rice, Pulses, Maize, Cash Crops, Sugarcane, Cotton, Tobacco, Oilseeds.

Part-II (Class-X)	Marks: 75	Time: 2:30 Hours
--------------------------	------------------	-------------------------

SECTION-VI	IMPORTANT MINERAL RESOURCES AND THEIR DISTRIBUTION Coal, Oil and Gas, Chrome, Rock Salts, Iron & Copper, Gypsum and Limestone, Marbles, Gold and Gemstones.
SECTION-VII	INDUSTRIAL PRODUCTS OF PAKISTAN Major Industrial Products and their Distribution, Food & Beverage Industries, Textile Industries, Chemical Industries, Engineering Industries, Miscellaneous Industries.
SECTION-VIII	MEANS OF TRANSPORTATION AND COMMUNICATIONS Different meaning of Transportation in terms of Time, Distance and Cost, Different Modes of Transportation, Means of Transportation and Communication – Roads, Highways, Rivers, Sea Routes, Different Means of Communication System – Post Office, Telegraph, Telephone, Radio and Television etc.
SECTION-IX	MAJOR COMMERCIAL ACTIVITIES Financial Institutions and Services, Application of Set Theory in Trade, Domestic Trade and its Significance, Foreign Trade and its Significance, Import, Exports, Comparative Advantage Theory, Brief Introduction of Balance of Payment.
SECTION-X	IMPORTANT COMMERCIAL CITIES AND PORTS The role of cities and ports in Commercial Cities, Major Commercial Cities of Pakistan, Major Ports of Pakistan, Seven Big World Cities and their main Commercial Activities.
SECTION-XI	COMMERCIAL GEOGRAPHY AND NATIONAL INTEGRATION Meaning of National Integration, Commercial Activity as mean to Integration, Spatial Interaction as a mean to Integration.

Prescribed Book: Commercial Geography (for Class IX-X)

Authors: 1. Carnal K.U. Qureshi 2. Dr. Azhar Hameed
3. Faqeer Niaz Ahmad 4. Muhammad Afzal Qureshi

Published by: Shaheen Publishers, Urdu Bazar, Lahore



لباس اور پارچہ بانی

وقت 2:00 گھنٹے	پارٹ۔ I (جماعت نہم)	نمبر 60
باب 1:- پارچہ بانی اور لباس	پارچہ بانی اور لباس کی تعریف، لباس کا ارتقاء، پارچہ بانی اور لباس کے مطالعہ کی اہمیت، عہد حاضر میں پارچہ بانی اور لباس کے مطالعہ کی ضرورت	
باب 2:- پارچہ بانی کے ریشے	پارچہ بانی کے ریشوں کی درجہ بندی، قدرتی ریشوں کی خصوصیات، انسانی خود ساختہ، ریشوں کی خصوصیات	
باب 3:- پاکستان میں پارچہ بانی کی صنعت	قدرتی ریشوں کی پیداوار کے اہم علاقے، پارچہ بانی کی صنعت کے مراکز، بنائی اور سلائی کے صنعتی مراکز	
باب 4:- ریشوں کی شناخت	ریشوں کی شناخت کے طریقے	
باب 5:- پارچہ بانی کے بنیادی طریقے	بنت اور کھڈی (Loom and Weaving)، صنعتی بنائی (Industrial Knitting) کے مختلف طریقے	
باب 6:- ٹیکسٹائل ڈیزائن	ٹیکسٹائل ڈیزائن، صنعتی پیمانے پر بننے والے ٹیکسٹائل ڈیزائن، رنگ اور ٹیکسٹائل	
باب 7:- لباس کا انتخاب	لباس کے انتخاب میں ٹیکسٹائل کے علم کی اہمیت	
مصنفہ: مسز شاہین پرویز	ناشر: آزاد بک ڈپو، لاہور	

وقت 2:00 گھنٹے	پارٹ۔ II (جماعت دہم)	نمبر 60
باب 8:- فیشن اور بننا سنورنا	فیشن / رواج، فیشن اور زیبائش / بننا سنورنا، فیشن میں جدت	
باب 9:- کپڑوں کی منصوبہ بندی کے اصول	کپڑوں کی منصوبہ بندی کے اصول، خاندان کے مختلف افراد کے لیے کپڑوں کی منصوبہ بندی	
باب 10:- کپڑوں کی حفاظت و دیکھ بھال اور ان کو سٹور کرنا	کپڑوں کی روزانہ، ہفتہ وار اور موسمی حفاظت و دیکھ بھال، کپڑوں کو سٹور کرنے کے اصول	
باب 11:- داغ دھبے دور کرنا	داغ دھبے دور کرنے کے اصول، داغ دھبے دور کرنے کے طریقے، داغ دھبے دور کرنے کے دوران حفاظتی اقدامات	
باب 12:- پارچہ بانی اور لباس میں کاروبار کے مواقع اور پیشے	چھوٹے اور درمیانہ درجے کے کاروبار، گھریلو بنیادوں پر کاروبار، مقامی مارکیٹ، بین الاقوامی مارکیٹ	
باب 13:- سلائی کا تعارف	سلائی مشین کے حصے، سلائی مشین کا استعمال اور اس کی دیکھ بھال، سلائی کرنے کے دوران حفاظتی اقدامات	
باب 14:- لباس بنانا	جسم کا ناپ لینا، ڈرافٹ بنانا، کپڑے کی کٹائی کرنا، سلائی کرنا	
مصنفہ: مسز شاہین پرویز، ڈاکٹر فرزانه کشور	ناشر: آزاد بک ڈپو، لاہور	

LIST OF PRACTICALS

1. Drafting individual bodies, taking accurate measurements and using correct drafting procedure.
2. Construction of Qameez and Shalwar.
3. Common mending methods.
4. Seams and seams finishes.
5. Laundry and stain removal.

Practical Examination will be based on three hours.



ISLAMIC HISTORY / MUSLIM HISTORY

Marks: 75	Part-I (Class-IX)	Time: 2.30 Hours
------------------	--------------------------	-------------------------

CHAPTER-1 CONDITION OF PRE-ISLAMIC WORLD WITH PARTICULAR

1. Condition of the world in general
2. Conditions of pre-Islamic Arabia, Religious, Social, Economic and Political

CHAPTER-2 THE LIFE OF PROPHET MUHAMMAD ﷺ

1. Life of Rasulullah ﷺ upto declaration of Nubuwaat His Daawat, Sacrifices of early Muslims
2. Hijrat-e-Habsha, Shaab-e-Abi Talib, Miraj, Journey to Taif
3. Ba'at-e-Aquba, Hijrat-e-Madina, Mesaq-e-Madina.
4. Brief history of the min Ghazwat
5. Conquest of makkah, Hajjat-ul-Wida and Khutba-ul-wida

CHAPTER-3 TEACHING OF PROPHET MUHAMMAD ﷺ

1. Teaching of the Holy Prophet ﷺ
2. Social Reformer
3. Head of State
4. Supreme Commander
5. Chief
6. Statesman and Administrator
7. Education
8. Upholder of Dignity of Labour
9. Perfect Ma

CHAPTER-4 DESCRIPTION OF KHULFA-E-RASHIDEEN

A brief biographical description of khulfa-e-rashideen

1. Hazrat Abu Bakar Siddique رضى الله تعالى عنه
2. Hazrat Umar-e-Farooq رضى الله تعالى عنه
3. Hazrat Usman-e-Ghani رضى الله تعالى عنه
4. Hazrat Ali Al-Murtaza رضى الله تعالى عنه

CHAPTER-5 ACHIEVEMENT OF KHULFA-E-RASHIDEEN

Contributions of Khulafa-e-Rashideen towards the cause of Islam.
Expansion of Islamic State Role of Hazrat Saad Bin Abi Waqas, Hazrat Khalid Bin Walid, Hazrat Abu Obyedah Bin Jarrah, Hazrat Umar Bin Al-Aas, Hazrat Abu Musa Al-Ashri, administration and Judiciary under the Pious Caliphs.

Marks: 75	Part-II (Class-IX)	Time: 2.30 Hours
------------------	---------------------------	-------------------------

CHAPTER-6 Umayyad

1. Hazrat Amir Muawiya
2. Yazid (Karbala and Hazrat Imam Hussain رضى الله تعالى عنه)
3. Hazrat Abdullah Bin Zubair
4. Abdul Malik bin Marwan
5. Walid bin Abdul Malik
6. Suleman bin Abdul Malik

7. Umar bin Abdul Aziz
 8. Causes of the decline of Ummayyads
- CHAPTER-7 ACHIEVEMENTS OF Umayyad**
1. Expansion and propagation of Islam with particular reference to Hujjaj bin Yousaf, Muhammad bin Qasim, Qutaiba bin Muslim, Musa bin Nasir, and Tariq bin Ziyad.
 2. Cultural and Scientific Achievements.
 3. Administration and Judiciary
- CHAPTER-8 ABBASID**
1. Al-Saffah
 2. Al-Mansoor
 3. Haroon-ur-Rashid
 4. Bar-Maki
 5. Mamun-ur-Rashid
 6. Al-Muatasim
- CHAPTER-9 ACHIEVEMENTS OF ABBASID**
1. Cultural Scientific and Literary Achievements
 2. Propagation and expansion of Islam
 3. Administrative reforms
 4. Socio-economic development
 5. Causes of the decline of Abbasides

Prescribed Book: History of Islam Classes – IX – X
Author: Dr. Shahid Mukhtar
Publisher: Imtiaz Book Depot



مبادیات ہوم اکنامکس

وقت 2:30 گھنٹے	پارٹ - I (جماعت نہم)	نمبر 75
----------------	----------------------	---------

- باب 1:- ہوم اکنامکس کا تعارف
ہوم اکنامکس کی تعلیم کے اغراض و مقاصد، ہوم اکنامکس کی افادیت و اہمیت، ہوم اکنامکس کا دیگر مضامین سے تعلق
- باب 2:- غذا اور غذائیت کا تعارف
غذا اور غذائیت کی تعریف، نقص غذائیت کے اثرات، غذا کے کام، بنیادی غذائی اجزاء کا مطالعہ، خوراک اور صحت
- باب 3:- غذا اور خوراک کو سمجھنا
متوازن غذا کی تعریف، بنیادی غذائی اجزاء، افراد کی غذائی ضروریات
- باب 4:- کھانوں کی تیاری
کھانا پکانا، کھانا پیش کرنا، خوراک سٹور کرنا، باورچی خانے میں حفاظتی تدابیر / اقدامات
- باب 5:- بچوں کی نگہداشت اور نشوونما کا تعارف
انسانی نشوونما کے معنی اور تعریف، انسانی نشوونما کے مطالعہ کی اہمیت، انسانی نشوونما کے اصول
- باب 6:- نشوونما کی خصوصیات
نوازشیدگی کا دور، شیر خوارگی، ابتدائی بچپن، درمیانی بچپن، نوبلوغت
- باب 7:- بچوں کے رویوں کے مسائل
روپیوں کے مسائل کی تعریف اور اقسام، رویوں کے مسائل کی وجوہات، رویوں کے مسائل کی روک تھام اور ان کا حل
- باب 8:- انسانی نشوونما میں خاندان اور والدین اور بچوں کے تعلقات، بہن بھائیوں سے تعلقات، ہم عمروں سے تعلقات، نگران کا کردار معاشرے کا کردار
- مصنفہ: مسز فرزانہ رضوی، اسسٹنٹ پروفیسر، گورنمنٹ کالج فار ویمن، مدینہ ٹاؤن، فیصل آباد
ایڈیٹر: مسز زینبہ مشکور، سینئر ماہر مضمون، پنجاب ٹیکسٹ بک بورڈ، لاہور
ناشر: زر قاپبلشرز، لاہور - برائے پنجاب ٹیکسٹ بک بورڈ لاہور

وقت 2:30 گھنٹے	پارٹ - II (جماعت دہم)	نمبر 75
----------------	-----------------------	---------

- باب 9:- پارچہ بانی اور لباس کا تعارف
پارچہ بانی اور لباس کی تعریف اور اہمیت، ریشے، پارچہ بانی کے ریشوں کی اقسام اور خصوصیات، مارکیٹ میں دستیاب خالص (Pure) اور امتزاجی (Blend) پارچہ جات کا مطالعہ
- باب 10:- لباس بنانا
سلائی کا سامان، لباس کی سلائی کے اصول، کپڑے اور ڈیزائن کے انتخاب کا طریقہ کار
- باب 11:- عمر کے مختلف ادوار میں لباس
لباس کے انتخاب پر اثر انداز ہونے والے عوامل، عمر کے مختلف ادوار میں لباس کی ضروریات، پرانے لباس کو رد و بدل کر کے نیا بنانا
- باب 12:- انتظام کا تعارف
انتظام کا تصور، اقدار، مقاصد اور معیار، ذرائع کا انتظام، وقت، آمدنی اور توانائی
- باب 13:- ماحول اور انتظام
صحت مند ماحول، صفائی اور فاضل مواد ٹھکانے لگانے کا انتظام، گھر میں تحفظ / حفاظتی اقدامات
- باب 14:- آرٹ اور ڈیزائن
ڈیزائن کو سمجھنا، ڈیزائن کے عناصر اور اصولوں کو سمجھنا، آرٹ کا گھر اور ماحول کے ساتھ تعلق
- باب 15:- روزمرہ زندگی میں آرٹ
لباس میں ڈیزائن کا استعمال، گھر اور ماحول میں ڈیزائن کا استعمال، کھانا پیش کرنے میں ڈیزائن کا استعمال

مصنفین: مسز شائستہ بٹ، مسز غزالہ یاسمین، مسز بشری نوشین، مسز ناہیدہ اظہر
ناشر: ٹائم پبلشرز، لاہور



سکیم آف سٹڈیز برائے درس نظامی گروپ

کل نمبر: 1200

پارٹ II (جماعت دہم)	پارٹ I (جماعت نہم)
اردو - پارٹ II 75 نمبر	اردو - پارٹ I 75 نمبر
انگلش - پارٹ II 75 نمبر	انگلش - پارٹ I 75 نمبر
ترجمۃ القرآن 50 نمبر	سیرت الرسول خاتم النبیین صَلَّی اللہُ عَلَیْہِ وَاٰلِہٖ وَسَلَّم (متبادل اسلامیات لازمی) 100 نمبر
مطالعہ پاکستان 100 نمبر	ترجمۃ القرآن 50 نمبر
جنرل ریاضی 75 نمبر	جنرل ریاضی 75 نمبر
جنرل سائنس 75 نمبر	جنرل سائنس 75 نمبر
القرآن 75 نمبر	القرآن 75 نمبر
الحديث 75 نمبر	الحديث 75 نمبر
میزان: 600 نمبر	میزان: 600 نمبر

نوٹ: انگریزی، مطالعہ پاکستان، جنرل سائنس اور جنرل ریاضی کے سچے بورڈ آف انٹرمیڈیٹ اینڈ سیکنڈری ایجوکیشن کی منظور شدہ درسی کتب کے مطابق تیار کئے جائیں گے۔ اردو پارٹ I اور اردو پارٹ II کا حصہ نیر و نظم اردو کی منظور کردہ درسی کتب کے مطابق جبکہ حصہ گرامر اردو کے بجائے عربی قواعد و انشاء پر مشتمل ہوگا۔ اور انشاء و قواعد (متبادل اردو جماعت نہم پارٹ I)، (35 نمبر) (متبادل اردو جماعت دہم پارٹ II) 40 نمبر پر مشتمل ہوں گے جبکہ کلاس نہم پارٹ I میں سیرت الرسول خاتم النبیین صَلَّی اللہُ عَلَیْہِ وَاٰلِہٖ وَسَلَّم (متبادل اسلامیات لازمی) کا پرچہ لیا جائے گا اور پارٹ II جماعت دہم میں اسلامیات لازمی پارٹ II۔ قواعد کتب:-

- 1- النحو واضح فی قواعد اللغة العربية (الاجزاء الثلاثة الاولى)
 - 2- از علی الجازم و مصطفی امین، مطبعہ المعارف و مکتبہا بمصر
 - 3- شرح مائتہ عامل از شیخ عبدالقادر جرجانی
 - 3- ہدایہ النحواز شیخ سراج الدین عثمانی چشتی کتب خانہ مجیدیہ ملتان
- الانشاء کی تفصیل:-
- 1- مضمون نویسی: ایسے موضوعات جو بیانیہ، تاریخی، معاشرتی، سائنسی اور معلوماتی نوعیت کے ہوں جیسے پاکستان، اسلامی شخصیات، تاریخی مقامات، قدرتی مناظر، عبادات اور اجتماعی مسائل۔
 - 2- خطوط نویسی اور عرضی نویسی: نجی، کاروباری، سرکاری خطوط، نیز ایسی درخواستیں جن کا تعلق ہماری روز مرہ زندگی کے مختلف پہلوؤں سے ہو۔
 - 3- کہانی / مکالمہ: دیئے ہوئے موضوع پر مکالمہ یا نا مکمل کہانی کی تکمیل۔
 - 4- کسی دی ہوئی عبارت کم از کم دوسو الفاظ پر مشتمل ہو اور اس سے متعلق سوالات کم از کم پانچ ہوں۔
- کتب:-

متعلقہ بورڈ کی انشا پر لکھی ہوئی منظور شدہ کتب میں سے انتخاب کیا جائے گا۔

مجوزہ کتاب:	اردو برائے جماعت نہم پارٹ I	اردو برائے جماعت نہم پارٹ II
	(برائے پنجاب ٹیکسٹ بک بورڈ لاہور)	(برائے پنجاب ٹیکسٹ بک بورڈ لاہور)
نام مصنفین:	پروفیسر ڈاکٹر ضیاء الحسن ڈاکٹر محمد صالح طاہر	پروفیسر ڈاکٹر رفیع الدین ہاشمی صدر شعبہ اردو
	پروفیسر اسد ایوب نیازی	(ریٹائرڈ)
	پروفیسر اسد ایوب نیازی پروفیسر محمد نعیم بزمی	ڈاکٹر عبداللہ شاہ ہاشمی سینئر ماہر مضمون اردو (ریٹائرڈ)
		جامعہ پنجاب لاہور
نام پبلشر:	غلام رسول اینڈ سنز، لاہور	علمی کتب خانہ اردو بازار، لاہور



اختیاری مضامین

القرآن

پارٹ-I	---	---	75 نمبر
پارٹ-II	---	---	75 نمبر
		ٹوٹل:	150 نمبر

پارٹ-I (جماعت نہم) کے نصاب کی تقسیم:

(سورۃ الفاتحہ، سورۃ البقرہ آیت نمبر 1 تا 252)

پارٹ-II (جماعت دہم) کے نصاب کی تقسیم:

(سورۃ البقرہ آیت نمبر 253 تا آخر و سورۃ آل عمران مکمل)

نوٹ: ترجمہ، سورتوں کے مضامین کا خلاصہ اور اہم واقعات، جن کی تفصیل یہ ہے۔

(الف) مذکورہ تین سورتوں کا سلیس اردو ترجمہ کسی ترجمہ قرآن سے۔ 20 نمبر

(i) آیات کریمہ کا سلیس ترجمہ 40 نمبر

(ii) آیات میں مفردات کا لغوی ترجمہ مع مختصر تشریح

(ب) سورتوں کی منتخب آیات کا خلاصہ مضامین پرچہ میں دی ہوئی آیات کے مضامین کا خلاصہ اپنے الفاظ 20 نمبر

میں لکھنا ہوگا۔ ایسے مضامین کا انتخاب کیا جائے گا جو پانچ تا دس آیات پر مشتمل ہوں۔

(ج) اہم واقعات 20 نمبر

مذکورہ تین سورتوں میں بیان شدہ واقعات کی تفصیل اپنے الفاظ میں لکھنا جیسے تخلیق آدم علیہ السلام، ذبح

بقرہ، تحویل کعبہ، حضرت مریم علیہا السلام کی ولادت اور کفالت وغیرہ

کتب: کسی مستند تفسیر سے سورۃ الفاتحہ، سورۃ البقرہ اور سورۃ آل عمران کا انتخاب



الحديث

پارٹ-I	---	---	75 نمبر
پارٹ-II	---	---	75 نمبر
ٹوٹل:	---	---	150 نمبر

وقت: 2:30 گھنٹے	پارٹ-I (جماعت نہم)	75 نمبر
-----------------	--------------------	---------

مندرجہ ذیل عنوانات پر مشتمل احادیث شامل ہوں گی۔

45 نمبر	حصہ اول
1- الاخلاص	2- التوبہ
3- الصبر	4- الصدق
5- المراقبة	6- التقوى
7- اليقين والتوكل والا ستقامة	8- التفكير في عظيم مخلوقات الله
9- النهي عن البدع و محدثات الامور	10- فيمن من سنة حسنة ووسية---الدلالة على الخير والدعاء الى هدى او ضلالة
11- التعاون على ابر والتقوى	12- النصيحة
13- الامر بالمعروف والنهي عن المنكر	14- الاصلاح بين الناس
15- ملاطفة اليتيم والبنات وسائر الضعفه	16- الوصية بالنساء
17- حق الزوج على المر	18- النفقة على العيال
19- حق الجار والوصية به	20- ير والوالدين وصلة الارجام
21- تحريم المقوق و قطيعة الرحم	22- بر اصدقاء الاب والام والا قارب
23- والزوجة و توقير العلماء الكبار واهل الفضل	
24- اكرام اهل بيت رسول الله ﷺ	
25- التحذير من ايداء الصالحين	26- الذهد في الدنيا
27- الجوع و خشونة العيش	
28- القناعة والعاف والاقتصاد في المعيشة والانفاق ونم السؤال من غير ضرورة	
29- جواز الاخذ من غير مسألة	30- البحث على الاكل من عمل يده
31- الكرم والجود والا نفاق في وجوة الخير	32- النهي عن البخل والشمع
33- الايثار والمواساة	34- التنفس في أمور الاخرة والا ستكثار مما يتبرك به
35- فضل الغنى الشاكر وهو من اخذ المال من وجهه، وصرفه في وجوهه المأمور بها	
36- ذكر الموت و قصر الامل	37- استحباب زيارة القبور للرجال وما يقوله الزائر
38- كراهية تمنى الموت بسبب ضرر نزل به	39- الورع وترك الشبهات
40- استحباب العذلة عند الفساد	41- فضل الاختلاط بالناس وحضور جمعهم و جماعاتهم
42- التواضع وخفض الجناح للمؤمنين	43- تحريم الكبر والا عجاب

30 نمبر	حصہ دوم
---------	---------

1- حسن الخلق، الحلم والا ناة والرفق	2- العفو والا عراض عن الجاهلين
3- احتمال الاذى	4- الغضب-----ولا انتھ للدين
5- الامرولة الامور بالرفق برعاياهم الوالى العادل	6- وجوب طاعة والاة الامور في غير معصية
7- النهي عن سؤال الامارة واختيار ترك الولاية	8- حث السلطان والقاضى وغيرهما-----
9- النهي عن تولية الامارة والقضاء وغيرهما-----	10- كتاب الادب: الحياء حفظ السر، الوفا بالعهد
11- الامر بالمحافضة على ما اعتاده من الخير	12- استحباب طيب الكلام و طلاقة الوجه عنه اللقاء
13- استحباب بيان الكلام و ايضاحه للمخاطب	14- اصغاء الجليس لحديث جليسه
15- الواعظ والا قتصادية	16- الوقار والسكينة
17- الندب الى اتيان الصلاة	18- اكرام الضيف
19- استحباب التبشير والتهنية بالخير ووداع صاحب	20- الاستخارة والمشاورة
21- آداب العيد	22- استحباب تقديم اليمين في التكریم

- 23- التسمية والحمد والابحیب فی الطعام وحضر الطعام وهو صائم
24- آداب الاكل والمثرب بالتقصیل
25- كرامات الاولیاء وفضلهم

كتب:

- 1- ریاض الصالحین از امام محی القمین ابوزکریا بحی بن شرف الموری۔ مکتبه رحمانیه، اُردو بازار، لاہور۔
2- زاد الطالبین مع حاشیہ مزاد الراغبین از محمد عاشق الہی البرانی۔ مکتبه حقانیہ، ملتان۔
3- بلوغ المرام من ادارة الاحکام از امام حافظ احمد بن علی العسقلانی۔ مکتبه سلفیہ، لاہور۔
4- کنہان کبیرہ از دست غیب شیرازی۔ جامعہ الزہرہ، کراچی۔
نوٹ نمبر 2: دی ہوئی احادیث کا ترجمہ اور مختصر تشریح پر مشتمل پانچ سوالات پوچھے جائیں گے۔

وقت: 2:30 گھنٹے	پارٹ - II (جماعت دہم)	نمبر 75
-----------------	-----------------------	---------

- 1- کتاب الطہارۃ
1- سنن الوضوء، الغسل المسنون و فرائض الغسل
2- احکام الحدث الاصغر والاکبر
3- المیاء، نجاسة الماء وطہارتہ، تطہیر البشر
4- التمیم، المسح علی الخفین والجبۃ
5- الحيض، النفاس والاستحاضۃ
6- احکام المعذور
7- الاستنجاء
2- کتاب الصلاۃ
1- اوقات الصلوۃ، الاذان والا قامتہ
2- شروط الصلوۃ، فرائض، واجبات، سنن، آداب الصلوۃ
3- اداء الصلوۃ
4- صلوۃ الرجل والمرأۃ
5- القراءة، الوتر، السنن، النوافل، قضاء
6- مفسدات و مکروہات الصلوۃ
7- الجماعة والامامتہ وسجود السہو والتلاوة
8- صلوۃ المريض والمسافر
9- صلوۃ الجمعة والعیدین والكسوف والاستسقاء والتراویح والخوف
10- احکام الجنائز والغسل والتکفین والتدفین والاحکام الشہید
کتاب الصوم
1- رمضان والصوم والنية وما بفسد الصوم وانقضاء
2- مالا یفسد الصوم وما بکرمه الصوم و صیام التطوع
والکفارة
3- الاعتکاف
4- صدقة الفطر

نمبر ۱۰

- كتب:
1- مختصر القدوری مع توضیح الضروری، از علامہ ابوالحسن احمد ان محمد القدوری
2- الروضۃ الندیہ مع شرح الدرر البہیہ، از علامہ ابوطیب صدیق بن حسن بن علی الحسینی، فاروقی کتب خانہ اردو بازار، لاہور
3- تبصرۃ العلوم (فاروقی کتب خانہ اردو بازار، لاہور)



جیومیٹرکل اینڈ ٹیکنیکل ڈرائنگ

75 نمبر

پارٹ-I

75 نمبر

پارٹ-II

میزان 150 نمبر

75 نمبر

پارٹ-I (جماعت نہم)

وقت: 2:30 گھنٹے

باب نمبر 1. جیومیٹرکل اینڈ ٹیکنیکل ڈرائنگ

جیومیٹرکل اینڈ ٹیکنیکل ڈرائنگ کی اہمیت، جیومیٹرکل ڈرائنگ کی تعریف، ٹیکنیکل ڈرائنگ کی تعریف، ڈرائنگ کے اوزار، ڈرائنگ بورڈ، ٹی سکور، دھار کی پڑتال، ٹی سکور کا استعمال، ڈرائنگ کاغذ کے مختلف سائز، کاغذ کی اقسام، سکاچ ٹیپ، پنسل اور اس کا تراشنا، پنسل پکڑنے کا طریقہ، پنسل کا استعمال، ربڑ اور رومال، ڈرائنگ بکس، پرکار اور اس کا استعمال، ڈیو انڈر اور اس کا استعمال، پروٹریکٹر، سیٹ سکور اور ان کا استعمال، سیٹ سکور کی جانچ پڑتال، پیمانے، احتیاطیں، حروف نویسی، امدادی خطوط، حروف کی چوڑائی اور اونچائی میں نسبت، حروف میں استحکام، گو تھک لیٹرنگ، ایک داب سے لکھائی، انگریزی حروف کی لکھائی کی مشق، ڈرائنگ بورڈ پر کام، کاغذ کو ڈرائنگ بورڈ پر نصب کرنا، حاشیہ اور نام کی تختی، ڈرائنگ شیٹ کی صفائی کے لئے، ضروری ہدایات

باب نمبر 2. پلین جیومیٹری

روایتی علامات، خطوط، زاویہ، تعارف، زاویہ کی اقسام، مختلف زاویے بنانا، مثلث، تعارف، زاویوں کے لحاظ سے مثلث کی اقسام، ضلعوں کے لحاظ سے مثلث کی اقسام، مختلف مثلثیں بنانا، چوکور، تعارف، مختلف چوکور بنانا، مساوی الرقبہ اشکال، بنیادی اصول، مساوی الرقبہ اشکال بنانا

باب نمبر 2. فری ہینڈ سکیچنگ

فری ہینڈ سکیچنگ کے لئے ضروری سامان، پنسل کا استعمال، دائرہ بنانے کا طریقہ، مختلف اوزاروں کے فری ہینڈ سکیچ بنانا (سوالات)

75 نمبر

پارٹ-II (جماعت دہم)

وقت: 2:30 گھنٹے

باب نمبر 3. سکیل

پیمائش کا عالمی نظام، پیمانے، سادہ پیمانہ، سکیل کی تشریح، وتری سکیل، سٹینڈرڈ لائنز، سٹینڈرڈ لائن کی اقسام اور ان کا استعمال

باب نمبر 4. سالڈ جیومیٹری

منشور، مخروط، مجسم کے حصے، مخصوص مجسم، مجسم کو ظاہر کرنے کے طریقے، پکٹوریل پروجیکشن، آر تھو گرافک پروجیکشن، آر تھو گرافک فیسٹ اپنگل پروجیکشن، فرنٹ ویو اور ٹاپ ویو کی وضاحت، سالڈ جیومیٹری کے سوال، تراش، تراش کے مختلف طریقے، تراش کے سوال، مشقی سوالات

باب نمبر 6. انجینئرنگ ڈرائنگ

کسی مجسم کو ظاہر کرنے کے طریقے، آر تھو گرافک تھر ڈائنگل پروجیکشن، ڈرائنگ بورڈ پر کاغذ کی افقی یا عمودی حالت، کاغذ کی تقسیم، افقی رخ کاغذ کی تقسیم، عمودی رخ کاغذ کی تقسیم، آر تھو گرافک پروجیکشن بنانا، آر تھو گرافک فری ہینڈ ڈرائنگ، مشقی سوالات، ابعادیت، ابعادی اشارات، ابعادیت کے رہنما اصول پروجیکشن بنانا، مختلف آئیجیکٹس کے آر تھو گرافک، نٹ اور قابلہ، پکٹوریل پروجیکشن، آئسو میٹرک ڈرائنگ، سوالات، اولیک ڈرائنگ، فری ہینڈ (آئسو میٹرک یا اولیک سکیچ بنانا)، ڈویلپمنٹ، سیلکس، تراش، تراش کی اقسام، مشقی سوات، فرہنگ

کتاب:- جیومیٹرکل اینڈ ٹیکنیکل ڈرائنگ

مصنفین:- ۱۔ محمد صدیق وقار ۲۔ عبد الحمید ۳۔ محمد جلیل جاوید

ایڈیٹر:- ۱۔ مسز انجم ممتاز و آصف ۲۔ مسز عائشہ وحید ناشر:- آزاد بک ڈپو، لاہور



ELECTRICAL WIRING

Part-I	40 Marks
Part-II	40 Marks
Practical	70 Marks
Total	150 Marks

Marks: 40	Part-I (Class-IX)	Time: 1:30 Hours
------------------	--------------------------	-------------------------

CHAPTER -1	Fundamental of Electricity Nature and generation of electricity (General Concept), Matter and its state, Atomic theory and ions, Electric charge, Electric current, Electric potential, Pressure, Resistance, Conductance, Law of resistance, Specific resistance, Ohm's Law
CHAPTER -2	Magnetism Magnet and magnetic materials, Properties of magnetic material, Nature of magnetic field, Electro magnetism, Flux and flux density
CHAPTER -3	Series and Circuit Series circuit, Parallel circuit, Series parallel combined circuit, Electrical power, Mechanical power Electrical energy, Tariff for electrical loads
CHAPTER -4	Cells and Batteries Cell and batteries, Connecting cells in series / parallel, Charging of batteries
CHAPTER -5	Simple Measuring Instruments Measuring system, Moving iron system, Moving coils system, Electro-dynamic system
CHAPTER -6	Wiring Methods Wiring methods, Material for electric wiring, Testing of electrical wiring, Estimation for wiring, Kinds of wires and cables, Earthing

LIST OF PRACTICALS FOR CLASS-IX (PART-I)

1. Draw the different symbols relating to electrical wiring field
2. **Basic Requirements for Electrical work:** To do work according to general workshop rules and regulations, To do work according to drawing and sketches, Listing of tools according to jobs, Listing of correct sequence of operation for the job, Working to safety regulations, Working to I.E.E regulations and general electricity rules, Elementary first aid including artificial respiration
3. **Cable Joints:** Identification and use of common hand tools, Care of tools and equipments, Identification of cables and wires w.r.t conductors and insulation, Trimming of cables (using electrician knife / insulation remover), Simple straight joint, Married joint, T-joint, Soldering of joint
4. **Basic electric circuit (Loose wiring):** Identification of electrical symbols, To control one lamp with one switch, To control one lamp and socket, To control three pin socket with one switch, Preparation of series test board, To control 3 lamps with three switches in parallel, To control a bell and lamp in series (bell indicator circuit), Fluorescent tube light connection. (test with series board), Two way switch circuit (stair circuit), To control two lamps in series and two lamp in parallel by two-way switch, To control fan with regulator / dimmer
5. **Identification of measuring instruments:** Identification of am-meter and its application, Identification of volt-meter and its application, Identification and using of long tester, Identification of Ohm-meter and its application, Identification and use of watt-meter, Identification and connection of energy meter.

Marks: 40	Part-II (Class-IIX)	Time: 1:30 Hours
------------------	----------------------------	-------------------------

- CHAPTER -1 Rules and Regulation for Wiring**
I.E.E. rules and regulations for wiring
- CHAPTER -2 Alternating Current**
A.C and D.C, Time period and frequency, Maximum value of alternating quantity, RMS value of sine wave, Self-inductance
Mutual inductance, Eddy current, Principle of transformer
- CHAPTER -3 Capacitor / Inductors**
Construction of capacitor, Types of capacitors, Working of capacitor in AC and DC Capacitance , Construction of inductor, Inductor in AC and DC, Uses of inductor, Reactance of capacitor, and inductor
Impedance - Power in AC
- CHAPTER -4 Generator /Motor**
working principle of Generator , kinds of DC Generators motors and its Construction, Parts of Generators, kinds of motor (AC &DC)
working principle of AC single phase motor Universal / series

LIST OF PRACTICALS FOR CLASS-X (PART-II)

Domestic Installations (Batten & PVC pipe wiring)

1. Kitchen installation
2. Bed room installation
3. Drawing room installation
4. Stair case installation (using two way switch)
5. Hall installation
6. Tumbler-bell installation
7. Indicator bell installation
8. Installation of two fluorescent tube in series using single chock
9. K.W.H meter and main switch + fuse installation
10. Wiring test methods: Leakage of Insulation Test, Polarity Test, Continuity Test

BOOK: Electrical Wiring

Publisher: Urdu Science Board 299-Upper Mall Lahore



WOOD WORKING

Part-I	40 Marks
Part-II	40 Marks
Practical	70 Marks
Total	150 Marks

Marks: 40	Part-I (Class-IX)	Time: 1:30 Hours
CHAPTER -1	Safety precautions and Trees Safety precautions, Tree, Cross section , Kinds of wood	
CHAPTER -2	Wood seasoning Introduction of wood, seasoning , Methods of natural & artificial seasoning	
CHAPTER -3	Wood Defects Knots, Rots, Shakes, Wood sawing, Methods of sawing	
CHAPTER -4	Measuring and marking tools Measuring tools, Testing tools, Marking tools	
CHAPTER -5	Saws Hands saws, Kinds of saws, Methods of sharpening the saws	
CHAPTER -6	Smooth Facing Tools Wooden plane, Metallic plane, Kinds of planes, Sharpening of the plane, Parts of chisel, Kinds of chisels, Methods of sharpening the chisel	

LIST OF PRACTICALS FOR CLASS-IX (PART-I)

1. **Basic Training:** Proper working, Identifying and using of common measuring tools
2. **Identifying and using of marking tools**
3. **Sawing practice:** Sawing with cross cut saw, Sawing with Rip saw, Sharpening and setting of saw teeth
4. **Planning practice:** Assembling and dismantling of plane, Sharpening of iron blade
5. **Joints of Wood:** Dado Joint, Cross Lap joint, Mortise and Tenon joint, Dovetail half joint (TEE), Bredle joint, Half Tee joint, Miter joint, Rub joint, Dowel joint, Groore joint, Screw Dowel joint, Scarp joint

Marks: 40	Part-II (Class-IIX)	Time: 1:30 Hours
CHAPTER -1	Boring tools (bits, drills) and Braces Bits, Drills, Parts of twist drill, Sharpening of auger bit, Sharpening of twist drill, Braces/hand drill machines	
CHAPTER -2	Nails and screws Kinds of nails, Types of screws	
CHAPTER -3	Types of screw drivers and Scrapers Types of screw drivers, Types of scrapers	
CHAPTER -4	Hammers and Mallets Kinds of hammers, Kinds of mallets	
CHAPTER -5	Foils, Holding and Miscellaneous Parts of foils, Types of foils, Holding tools , Miscellaneous tools	
CHAPTER -6	Surface Finishing, Colouring and Painting Sand papers, Filling, Staining, Painting/polishing	
CHAPTER -7	Glues Kinds of Glues – Methods to prepare glue	
CHAPTER -8	Wood Veneer, Ply Wood Hardboard Formica Introduction, Cutting , Kinds of veneer, Uses of veneer, Plywood, Use of plywood, Methods of plywood, Characteristics of plywood, Hard board, Preparation and characteristics of hard board, Uses of Hard Board, Formica, Characteristics of Formica	

LIST OF PRACTICALS FOR CLASS-X (PART-II)**Skill Requirements**

- | | |
|-----------------------------------|---------------------------------|
| 1. Prepare a simple picture frame | 2. Prepare a switch board |
| 3. Prepare a paper tray | 4. Prepare a waste paper basket |
| 5. Book shelf | 6. Book ends |
| 7. Center Table | 8. Stool |
| 9. Folding stool | 10. Towel Stand |

Finishing of Center Table

-Sand papering

-Surface colouring

-Sprit polishing

Painting of Towel Stand

-Sand papering

-1st Coat and Enamel by brush

-2nd coat of enamel by brush

Repairing and refinishing of house hold and school furniture

BOOK: Wood Working

Publisher: Urdu Science Board, Lahore.



REPAIR & MAINTENANCE OF DOMESTIC REFRIGERATOR & AIR CONDITIONER

Part-I	40 Marks
Part-II	40 Marks
Practical	70 Marks
Total	150 Marks

Marks: 40	Part-I (Class-IX)	Time: 1:30 Hours
------------------	--------------------------	-------------------------

CHAPTER -1 Refrigeration

Definition of Refrigeration and Air conditioning. Principles of Refrigeration.
Scope of Refrigeration

CHAPTER -2 Heat

Definition of Heat, Various Types of Heat, Modes of Heat, Units of Heat

CHAPTER -3 Energy

Various Types of Energy

CHAPTER -4 Electricity

Conductor, Insulator & Resistor, Volt, Ampere and Resistance, Ohm's Law,
Series and parallel circuit, Magnetism, Electro-magnetic coil

CHAPTER -5 Mechanical Refrigeration Cycle

Mechanical Vapor Compressor Cycle, Major Parts of Vapor, Compression
System, Compressors, Various types of Evaporators
Condensers Refrigerant controls

CHAPTER -6 Refrigerator

Construction detail of Refrigeration, Major parts and body of the refrigerator,
Size measurement, Placement of refrigerator

CHAPTER -7 Refrigerants

Chemical names & formula of common refrigerators, Size and Color Coding

CHAPTER -8 Electrical components

Electrical Motors, Capacitors, Controls, Thermostat & Relays

Marks: 40	Part-II (Class-IIX)	Time: 1:30 Hours
------------------	----------------------------	-------------------------

CHAPTER -1 Motors

Types of Motor, AC & DC motors, Starting & Running, Winding, Terminal
Tracing

CHAPTER -2 Defrosting

Methods of Defrosting, Off-Cycle Defrosting, Hot Gas Defrosting

CHAPTER -3 Window Air conditioners

Window type Air Conditioner, Installation and maintenance

CHAPTER -4 Gas Charging

Oil charging, Evacuation the system, Gas charging

CHAPTER -5 Mechanical Trouble shooting

Mechanical Trouble in refrigerator and window air conditioner, Reasons &
Causes of mechanical faults in refrigerator and window air conditioner,
Remedies for common faults of refrigerator and window air

CHAPTER -6 Electrical Trouble shooting

Electrical Troubles in Refrigerator and Air conditioning, Reasons & causes
of common Electrical Faults in Refrigerator and Air conditioning, Remedies
for common Electrical Faults of Refrigerator and window Air conditioning

CHAPTER -7 Desert Cooler

Working principle of Desert cooler, Types of Desert cooler Construction of
desert cooler, Trouble shooting of desert cooler

LIST OF PRACTICALS FOR CLASS-IX (PART-I)

1. Introduction and uses of Basic Workshop Tools and test instruments.
2. Making Diagrams with description of tools and testing instruments.
3. Practice of Drilling.
4. Sheet Metal Jobs (I. Measuring II. Filling III. Surfacing of metal piece).
5. Prepare the graph for the process of heating ice into steam, showing various processes.
6. Measuring of Volts, Current and Amperes.
7. Stair Wiring with Two Way Switch.
8. Wiring of Florescent Tube.
9. Call Bell Circuit with one & two Push Buttons.
10. Preparation of Series Test Lamp.
11. Making Test Board.
12. To make wiring of three bulbs with Single switch in series.
13. To make wiring circuit of 03 bulbs in parallel with one switch.
14. To make the wiring circuit of 3 bulbs with 3 switches in parallel.
15. To check the compressor winding with the help of multi – meter.
16. To check the compressor winding with Series Test Lamp.
17. Cutting of tube with Tube cutter.
18. Bending of Copper tube cutter.
19. Flaring of Copper tube.
20. Swaging of Copper tube.
21. Demonstration of Gas welding & Identification of Gas. Welding Equipment.
22. Practice of Oxyacetylene flame, Soldering, Brazing of Copper tubes.
23. Testing Overload.
24. Testing Relays.
25. Testing of Thermostats.
26. Testing starting and running capacitors.
27. Testing of door switch and light.
28. Practice on electrical wiring of defrost type refrigerator

LIST OF PRACTICALS FOR CLASS-X (PART-II)

1. Servicing of open types Reciprocating compressor including the lapping of Flapper valves.
2. Oil charging in the open type compressors.
3. Oil charging in a sealed compressor.
4. Evacuating, leak testing and Gas charging in Domestic refrigerator.
5. Repairing and maintaining of door gasket.
6. Tracing of Terminals of a sealed and semi-sealed compressor with the help of AVO-meter.
7. Practice of wiring diagram of no frost type domestic refrigerator.
8. Tracing the terminals of three speed fan motor.
9. Release of struck motor compressor.
10. Trouble shooting of Refrigerator.
11. Wiring diagram of domestic window type air-conditioner.
12. Wiring of Heating/Cooling type window Air conditioner.
13. Pressurizing the window air conditioner with Nitrogen with soap solution for leak testing.
14. Leak testing with electronic leak detector.
15. Evacuation and gas charging of a window type Air-conditioner.
16. Transferring of gas from one cylinder to another.
17. Trouble shooting in Electrical system of window type Air conditioner.
18. Installation of Window type Air conditioner.
19. Wiring practice of Desert cooler.
20. Trouble shooting in Electrical system of Desert cooler

BOOK: Repair & Maintenance of Domestic Refrigerator, Air Conditioner

Publisher: Urdu Science Board Lahore.



COMPUTER HARDWARE

Part-I	40 Marks
Part-II	40 Marks
Practical	70 Marks
Total	150 Marks

Part-I (Class-IX)	Marks: 40	Time: 1:30 Hours
--------------------------	------------------	-------------------------

CHAPTER -1	Electrical Essentials of Electronics Electrical Terminology & their symbols, Conductor, Insulator and Semiconductor, Ohm's law, Energy & power, Circuits
CHAPTER -2	Electronics passive components Resistor , Resistors of Colour coding, Capacitor & Types of Capacitor, Inductor, Transformer
CHAPTER -3	Electronics Active components Basic of Electronics, Semiconductor, P-type N-type silicon, Diode Transistors, Amplifier
CHAPTER -4	Digital and analog system Number systems, Computer Code, Bit & bytes, Types of Logic Gates
CHAPTER -5	Basics of Computer Introduction of Computer, Types of Computer, Parts of Computer Working procedure of computer
CHAPTER -6	Care of Computer Introduction of care computer, Method of taking of Back-up, Damages of hardware, Accidental deletion, Care of hard disk, Virus
CHAPTER -7	Boot- up Procedure Plug and Play
CHAPTER -8	Input and Output Devices Keyboard , Mouse, Mic, Scanner , Digital camera, Output devices, Monitor, Printer, Speakers

Marks: 40	Part-II (Class-IX)	Time: 1:30 Hours
------------------	---------------------------	-------------------------

CHAPTER -1	Storage Devices Computer Storage Devices, Floppy Disk/Drive & its function, Hard Disk and its types, Types of CD ROM, Functions of Zip Drive
CHAPTER -2	Memory and processor Primary and Secondary Memory, Read Only Memory (ROM), Random Access Memory (RAM) and its types and functions, Central Processing Unit (CPU) and its types, Co-processors
CHAPTER -3	Mother Board Mother Board, Bus Based computers, Single Board Based computers, IBM methods, Types of Mother Board, Jumpers and Cables Setting, Power Supply
CHAPTER -4	Bus and Slots Function of Buses, Function of Slots, Interface Cards and its types, Modem and its Functions, TV Tuner Card and its Functions
CHAPTER -5	Network and Communication Networking, Advantages of Networking, Methods of Networking, Topology and its types, Types of Networking
CHAPTER -6	Operating Systems Operating System, Disk Operating System, Windows Operating System

LIST OF PRACTICALS FOR CLASS-IX (PART-I)

1. Identify the electronics Component and Color code
2. Connection of the Resister in series and parallel
3. Connection of the inductor in series and parallel
4. Connection of the inductor in series and parallel
5. Use of Hand tools
6. Use of Digital meter
7. Use of analog meter
8. Measuring the primary and secondary voltage of Transformers
9. Testing of Diode with ohm meter
10. Half Wave Rectifier
11. Full Wave Rectifier
12. Bridge rectifier
13. Regulated Power Supply
14. Use of I.C
15. Checking of NPN and PNP transistor with meter
16. Logic gates
17. AND gate
18. NAND gate
19. OR gate
20. NOR gate
21. Inverter
22. Exclusive
23. Exclusive NOR gate
24. Measurement of the Switch Mod Supply Voltage
25. Power supply Installation in CUP
26. Checking of Monitor Controls
27. Checking of CRT
28. Keyboard function
29. Mouse function
30. Scanner function
31. Display of RAM
32. Configure the Mother Board Slots
33. Display of Computer Parts
34. Dot matrix printer installation with driver
35. Inkjet printer installation with driver
36. Laser jet printer installation with driver

LIST OF PRACTICALS FOR CLASS-X (PART-II)

1. Installation of Floppy Disk Drive
2. Installation of CD-drive
3. Installation of CD-Writer
4. Installation of Mother Board.
5. Data Bus and its Connections
6. Installation of Ram
7. Processor installation
8. Processor Fan installations
9. View of cards
10. Auto Configuration and Defaults
11. Bios Setup Configuration
12. Display card operation and its installation
13. Sound card operation and its installation
14. Multimedia Checking
15. Fax modem operation and its installation
16. Network interface card operation and installation
17. TV tuner card operation & installation
18. Computer assembling
19. Computer dissembling
20. Prepare boot able/Startup Disk
21. Transfer booting system
22. Power on self-test
23. F Disk
24. Disk Defragmentation
25. Security Password setting
26. Removal of Security Password
27. Disk Formatting
28. DOS (commands)
29. Windows installation
30. Windows (commands)
31. Installation and prerequisites of computer application package
32. Word commands and shortcut keys
33. Excel commands and shortcut keys
34. Power point commands and shortcut keys

BOOK: Computer Hardware
Publisher: Urdu Science Board Lahore.



POULTRY FARMING

Part-I	40 Marks
Part-II	40 Marks
Practical	70 Marks
Total	150 Marks

Part-I (Class-IX)	Marks: 40	Time: 1:30 Hours
--------------------------	------------------	-------------------------

CHAPTER -1	Introduction of Poultry Farming Poultry farming, Importance of protein, Egg and its meat as human diet, Importance of Poultry Farming, Important Tips of Poultry farming
CHAPTER -2	Chicken anatomy and body systems Skeletal system, Digestive system, Respiratory system, Nervous system, Reproductive system, Circulatory system
CHAPTER -3	Breeds of Chicken Breeds classification, Breed standards, Egg producing breeds Meat producing breeds
CHAPTER -4	Hatchery management Traditional v/s modern chick hatching, Selection of hatching eggs. Hatchery building and equipment's, Incubators and incubation of eggs, Taking off hatch, Chick sexing , grading, packing and transportation, Hatchery management and hygienic measures
CHAPTER -5	Poultry Housing / Shed Selection the Site and area for poultry farm, Kinds of poultry farms and its constructional kinds, Management Husbandry Hints; proper temperature, ventilation, lighting etc, Systems of poultry housing
CHAPTER -6	Poultry House Equipment's Types of brooders, Types of feeders, Types of waterer, Egg laying nests, Egg collection trays, Precautions; -Vaccination kit -Spray Pump -DE breaker etc.

Marks: 40	Part-II (Class-IIIX)	Time: 1:30 Hours
------------------	-----------------------------	-------------------------

CHAPTER -1	Poultry feed Introduction of poultry feed, Essential feed nutrients, Importance of Feed ingredients, Nutritional requirements of poultry birds , Balance Ration Different Methods of Feed storage, Commercial feed for different birds
CHAPTER -2	Broiler Farming Purchase of chicks, Brooding, Vaccination procedure of the chicks Broiler Feeds and feedings, Broiler Farm management, Economical analysis of Broiler Farming
CHAPTER -3	Layer Farming Purchase of layer chicks, Brooding and rearing management, Vaccination program, Lighting program, Layer feeds and feeding, Selection of laying and no-laying hen, Different Types supply of laying nets, Egg collection, storage and marketing, Economical analysis of Layer Farming
CHAPTER -4	Poultry Diseases Introduction of Poultry Diseases, Bacterial diseases & preventive measures, Viral diseases & preventive measures, Mycotic and Fungal diseases & preventive measures, Parasitic diseases (external & internal parasite) & preventive measures, Nutritional diseases , Managing problems & preventive measures
CHAPTER -5	Disease Control Measures Bio-Security and its importance , Measures of disease control, Purchase of graded chicks, Parasitic control

CHAPTER -6 Record Keeping

Introduction of record keeping, Importance of Record keeping Different
Types of record; -Annual purchase of birds
-Annual purchase of feed -Building, machinery and
Equipment record. -Mortality record vaccination record
-Egg laying record -Daily, monthly income and expenses record

LIST OF PRACTICALS FOR CLASS-IX (PART-I)

1. Demonstration of internal organs of chicken
2. Different types of feeders
3. Demonstration of different types of waters
4. Demonstration of different types of brooders
5. Practical demonstration of different breeds
6. Practical methods of vaccination
7. Different injectable medicines, their use and some important medicines
8. Practical cleaning of poultry sheds
9. Differentiating layer and non-layer
10. Practical hatchery operation
11. Practical method for getting eggs for hatching
12. Treatment of external parasites
13. Toxicosis in poultry
14. Clinical examination of sick birds
15. Postmortem of sick birds

LIST OF PRACTICALS FOR CLASS-X (PART-II)

1. Diagnosis of poultry diseases
2. Different feed formulation: Broiler chick (starter ration), Broiler chick (finisher ration), Layer chick (starter ration (a &b), Layer chick (grower ration (a &b), Laying hen (a & b), Laying hen (premix)
3. Disposing off dead birds
4. Getting hatching eggs
5. Candling the eggs
6. Cleanliness of hatchery and incubator

Book: Poultry Farming
Publisher: Urdu Science Board Lahore.



FISH FARMING

Part-I	40 Marks
Part-II	40 Marks
Practical	70 Marks
Total	150 Marks

Part-I (Class-IX)	Marks: 40	Time: 1:30 Hours
--------------------------	------------------	-------------------------

CHAPTER -1	Introduction of fish culture and Aquaculture Definition of fish farming, Introduction of fish culture, Different Types of Fish culture, Importance of Aquaculture, History of Aquaculture, Future of Aquaculture in Pakistan
CHAPTER -2	Introduction of Fish Pond Site selection, Types of Soil, Fish Ponds
CHAPTER -3	Water Quality and its management Water quality, Methods to improve water quality, Aquatic weeds, Water pollution
CHAPTER -4	Culturable Fish Species Introduction of culturable fish, Indian Carps, Chinese Carps, Common Carps, Other Culturable fish
CHAPTER -5	Aquatic Plants and Animals Aquatic Plants and its control, Various types of Aquatic Animals and its control
CHAPTER -6	Fish Seed stocking Fish seed transport, Stocking Density

Marks: 40	Part-II (Class-IX)	Time: 1:30 Hours
------------------	---------------------------	-------------------------

CHAPTER -1	Feed & Fertilizers Definition of fish feed, Introduction of natural feed, Various types of Fertilizers, Application of Fertilizers, Organic & Inorganic fertilizers
CHAPTER -2	Fish Hatchery / Breeding Introduction of Fish hatchery, Components of fish hatchery, Brood stock rearing, Types of Fish Breeding, Artificial breeding
CHAPTER -3	Fish Disease and Control Fish symptoms, Types of fish diseases, Disease Control management and treatment
CHAPTER -4	Fish Harvesting Introduction of nets & its types, Various Methods of Harvesting
CHAPTER -5	Economics / Marketing Feasibility Report, Various methods to Keep fish, Fresh
CHAPTER -6	Integrated Fish Farming Introduction of integrated fish Farming, Various Types of integration

LIST OF PRACTICALS FOR CLASS-IX (PART-I)

- Studies on Fish Pond:** Site selection for fish pond, Basic components of fish farm, Calculate surface area of fish pond, Calculate water volume of fish pond
- Soil Analysis:** Collection of soil samples, Ribbon test for soil analysis, Ball test for soil analysis, Calculate water loss by seepage
- Water Analysis:** Measurement of water temperature of fish pond, Measurement of pH of fish pond, Measurement of dissolved oxygen of fish pond, Measurement of TDS of fish pond, Measurement of light penetration in fish pond

4. **Identification of Fishes and Aquatic Plants:** Identification of culturable species, Identification and preservation of different fishes, Identification and preservation of aquatic plants, Identification of planktons in pond water
5. **Seed Stocking in Fish Pond:** Measurement of weight/length of fish pond, Method of seed stocking in fish pond

LIST OF PRACTICALS FOR CLASS-X (PART-II)

1. **Feed & Fertilizers:** Introduction to feed ingredients, Preparation of fish feed, Application of fish feed in ponds, Introduction to fertilizers, Application of fertilizers in fish ponds
2. **Fish Breeding:** Introduction to fish hatchery, Brood stock selection, Demonstration of injection & striping
3. **Fish Disease and control:** Symptoms of disease fish, Control of fish disease
4. **Fish Harvesting:** Introduction to different types of nets, Making of hand nets, Methods of harvesting
5. **Feasibility report and marketing:** Making of feasibility report of one hectare fish farm, Identification of fresh and outdated fish

Book: Fish Farming

Publisher: Urdu Science Board, Lahore.



DRESS MAKING & FASHION DESIGNING

Part-I	40 Marks
Part-II	40 Marks
Practical	70 Marks
Total	150 Marks

Part-I (Class-IX)	Marks: 40	Time: 1:30 Hours
--------------------------	------------------	-------------------------

CHAPTER -1	Introduction Tools and electronic machine, Adjustment, Oiling of parts, Maintenance and operate
CHAPTER -2	Sewing machine Types of sewing machine, Care & Handling, Cleaning & oiling, Faults finding
CHAPTER -3	Colour & Design Selection of Colour and design for different age group
CHAPTER -4	Drafting and Pattern Making Introduction of drafting and pattern making Children figure and taking their measurement, Terms used in garment Industry, Visit of garment factory to familiarize with the production work of industry
CHAPTER -5	Importance of Dress making and Fashion Designing Importance and use of dress making & fashion designing in the present age
CHAPTER -6	Size System Procedure taking of the Human body Procedure taking measurement of the From sample, Flow chart, Different Height group, Different Width group Calculate the Formula of different sizes

Marks: 40	Part-II (Class-IIX)	Time: 1:30 Hours
------------------	----------------------------	-------------------------

CHAPTER -1	Textile Fabrics Different types of fibers, Source and properties of Natural fibers, Source and properties of Man Made Fibers
CHAPTER -2	Fiber to yarn Different processes of Yarn manufacturing
CHAPTER -3	Fabric Construction Construction techniques, Properties of Weaving, Knitting qualities, Felting fabrics
CHAPTER -4	Finishes applied on fabrics Qualities of Finishing process, Qualities of Unfinished cloth
CHAPTER -5	Figure analysis Details of Size System, Figure analysis of children ages from 1-14 years (boys & girls)
CHAPTER -6	Measurements Different Types of measurements, Various formulas for different size calculation
CHAPTER -7	Master Pattern Importance of Master Pattern, Advantages of Master Pattern, Terminology in garment industry, Symbols used in garment industry, Accessories used in garment industry, Effects of arts elements

LIST OF PRACTICALS FOR CLASS-IX (PART-I)

1. Tools in electronic machine, adjustment, oiling of parts, maintenance & operate
2. Sewing machine. Types, care & handling, cleaning & oiling, faults finding
3. Colour & design. Selection of colours, combination of colours, identification colours
4. Draft and cut under wares in different size
5. Draft and cut out pattern of bib and feeder
6. Draft and cut pattern of simple and churidar pajamas in different designs (Thaila cut and square cut)
7. Draft and cut pattern of yoke frock I standard sizes
8. Ladies shalwar & Kameez
9. Draft and cut pattern of romper
10. Draft and cut pattern of apron in different designs

LIST OF PRACTICALS FOR CLASS-X (PART-II)

1. Two pieces of frock in different sizes and styles
2. Draft and cut pattern of shalwar (ladies & gents)
3. Ladies Kameez different sizes and style
4. Ladies blouse
5. Gents bush-shirts full and half sleeves
6. Gents shirts of different sizes
7. Gents Kurtas
8. Ladies slips of different styles
9. Kemi niker and paints
10. Children night suit
11. Coatee of different style and sizes

Book: Dress Making & Fashion Designing

Author: Salma Hussain

Publisher: Urdu science Board, 299, Lahore.



BEAUTICIAN

Part-I	40 Marks
Part-II	40 Marks
Practical	70 Marks
Total	150 Marks

Part-I (Class-IX)	Marks: 40	Time: 1:30 Hours
--------------------------	------------------	-------------------------

CHAPTER -1	Health Healthy body & Fresh mind, Importance of Food & health, Ages and stages, Shapes of body, Importance of Exercise, Importance of Height and weight, Importance of Beauty care
CHAPTER -2	Energetic food Hygienic food, Importance of Vegetable and fruit Importance of Vitamins, Types of Vitamins in Food, Refreshing drinks and cereals Types of drinks and cereals
CHAPTER -3	Skin Various Types of skin, Problems and solutions of skin, Nourishment of skin, Techniques of massage, Skin care

Marks: 40	Part-II (Class-IIX)	Time: 1:30 Hours
------------------	----------------------------	-------------------------

CHAPTER -1	Herbal Cosmetics Masks and its kinds, Masking of Herbal cosmetics, Cleansing milk, Hair setting lotion - Hair Spray, Perming lotion & Neaulizer, Upton -Wax – Hinna -Shampoo Beauty cream - Hair oil, Hair conditioner - Massage oil
CHAPTER -2	Hair Treatments Types of hair, Hair Problems, Care - Hair conditioning Exercises
CHAPTER -3	Allergic Reactions Solution of Bleach Damages, Reaction of perming lotion, Reaction of creams, Solution of skin and hair Damages, Environment

LIST OF PRACTICALS FOR CLASS-IX (PART-I)

- Skin Treatments:** Manicure and pedicure, Waxing, Bleaching, Threading, Shaving, Body Massage, Facial, Skin Polish
- Perming:** Hair types, Perm types, Perming lotions, List of things, Perming method, Shampooing and conditioning of perm
- Bleach:** Hair bleach, Streaking and highlighting
- Colouring and Tinting:** Hair types, Black color, Brown color, Golden color, Beige color, Copper, Bargandi, reddish and Mahagani, Stage color, Colouring method
- Shampoo and conditioning**
- Straightening**
- Singing (split ends)**

LIST OF PRACTICALS FOR CLASS-X (PART-II)

- Make up:** Face diagnosis, Cosmetic selection, Cleansing milk, creams and oils usage, Day make up, Evening make up, Party make up, Bridal make up, Eye brow shaping and setting, Application of false eye lashes, Base, Eye make up, Blush on application, Contouring and highlighting, Shaping lips and nails
- Hair style:** Parting and cutting, Trimming, U shape cut, V shape cut, Bob cut, Baby cut, Boy cut, Steps cut, Sleek, razor and layers cut, Blow dry, Pleats, Bubbles, Twists, Roller setting, English hair style, Fleeks

Book: Beautician
Author: Sameema Nadeem
Publisher: Urdu Science Board, Lahore



FASHION DESIGNING

Theory Part – I	40 Marks
Theory Part– II	40 Marks
Practical – I	35 Marks
Practical - II	35 Marks
Total	150 Marks

Part-I (Class-IX)	Marks: 40	Time: 1:30 Hours
--------------------------	------------------	-------------------------

Chapter 1 : Introduction to Fashion Designing

- 1.1 Define Fashion? What is Fashion Design?
- 1.2 Factors Influencing Fashion
- 1.3 What does 'Fashion' Mean to You?
- 1.4 Cultural Influence on Fashion in Pakistan
- 1.5 Fashion in Context to 'South Asia' and 'West'
- 1.6 Importance of Fashion in Modern Society

Chapter 2 : Elements of Design

- 2.1 Line
- 2.2 Shape
- 2.3 Form
- 2.4 Space
- 2.5 Texture
- 2.6 Colour
- 2.7 Colour Theory
- 2.8 Silhouette

Chapter 3 : Principles of Design

- 3.1 Harmony
- 3.2 Contrast
- 3.3 Repetition
- 3.4 Rhythm / Movement
- 3.5 Scale / Proportion

Chapter 4 : Historical Aspects of Fashion Design

- 4.1 Introduction to Indus Valley Civilization
- 4.2 Introduction to Mehrgarh
- 4.3 Mehrgarh Costume Tradition
- 4.4 Introduction to Harappa and Mohenjo-Daro Civilization
- 4.5 Lifestyle
- 4.6 Clothing Tradition in the Indus Valley Civilization
- 4.7 Introduction to Gandhara Civilization (1200 BC – 800 BC)
- 4.8 Gandhara Costume Tradition

Chapter 5 : Crafts of Pakistan

- 5.1 Punjab
- 5.2 Balochistan
- 5.3 Sindh
- 5.4 Khyber Pakhtunkhwa
- 5.5 Azad Kashmir
- 5.6 Gilgit Baltistan

Chapter 6 : Basic Drawing and Anatomy

- 6.1 Sketching Skills and Basic Steps of Learning How to Draw
- 6.2 Basic Line Drawing
- 6.3 Basic Shapes
- 6.4 Object Drawing

6.5 Human Anatomy Drawing

Chapter 7 : Fashion Drawing and Design Detail

7.1 Introduction to Fashion Figure (Croquis)

7.2 Understanding the Anatomy of a Fashion Figure

7.3 Deriving Fashion Technical from Basic Garment Shapes

7.4 Types of Garments

7.5 Fashion Details: Necklines, Collars and Sleeves

Chapter 8 : Basics of Textiles

8.1 History of Cotton

8.2 Importance of Cotton for Pakistan

8.3 Introduction to Different Fiber

8.4 Types of Fiber

8.5 Natural Fibers

8.6 Man-made Fibers

Chapter 9 : Basics of Sewing

9.1 Introduction to Sewing

9.2 Essential Sewing Tools

9.3 How to Thread a Needle

9.4 Fabric Pressing

9.5 Basic Hand Stitches

9.6 Introduction to Sewing Machine (Parts of Machine)

9.7 Stitching Practices on Paper

9.8 A Quick Guide to Fabrics

9.9 Types of Fabric

9.10 Basic Stitches in Machine Sewing on Fabric

9.11 Basic Seam Stitching

9.12 Precautions / Sewing Safety Tips

Prescribed Book:

Fashion Designing for Part – I (Class –IX) (9th)

Authors:

Dr. Asmarah Ahmed, Ms. Faiza Khalid, Ms. Sarah Javaid,
Ms. Kainat Siddique, Ms. Anum Fayyaz, Ms. Afia Mansoor,
Ms. Sobia Akram

Publisher:

Punjab Curriculum and TextBook Board, Lahore

Printer:

Nadeem younis Printers, Lahore.



AGRICULTURE SCIENCE (TECH)

Theory Part – I	40 Marks
Theory Part– II	40 Marks
Practical – I	35 Marks
Practical - II	35 Marks
Total	150 Marks

Part-I (Class-IX)**Marks: 40****Time: 1:30 Hours****Unit 1 : Agriculture in Pakistan**

- 1.1 Importance of Agriculture
- 1.2 Components of Agriculture
- 1.3 Crop Husbandry
- 1.4 Animal Husbandry
- 1.5 Poultry Farming
- 1.6 Fish farming
- 1.7 Agro Forestry
- 1.8 Systems of Agriculture
- 1.9 Irrigated Agriculture
- 1.10 Constraints in Agriculture

Unit 2 : Crop Production and Farming System

- 2.1 Introduction
- 2.2 Factors affecting crop production
- 2.3 Major Crops
- 2.4 Minor Crops
- 2.5 Fodder Crops
- 2.6 Cropping System
- 2.7 Types of Cropping Systems

Unit 3 : Production Technologies of Major Rabi and Kharif Crops

- 3.1 Rabi Crops
- 3.2 Production Technologies of Major Rabi Crops
- 3.3 Kharif Crops
- 3.4 Production Technologies of Major Kharif Crops

Unit 4 : Crop Rotation and Cropping Pattern

- 4.1 Crop Rotation
- 4.2 Principles of Crop Rotation
- 4.3 Selection of Crops Suitable for Crop Rotation
- 4.4 Factors Affecting Crop Rotation
- 4.5 Cropping Pattern
- 4.6 Important Cropping Patterns of Pakistan

Unit 5 : Soil and Water Conservation

- 5.1 Modern Concept of Soil and Water Conservation
- 5.2 Causes of Soil Degradation
- 5.3 Watershed Management
- 5.4 On Farm Water Management
- 5.5 Re-Use of Drainage Water
- 5.6 Harvesting and Storage of Rainfall Water

Unit 6 : Management of Soil and Water Problems

- 6.1 Introduction
- 6.2 Management of Soil and Water
- 6.3 Water Logging, Salinity and Sodcity
- 6.4 Water Losses

- 6.5 Soil Drainage
- 6.6 Use of Organic and Chemical Amendments

Unit 7 : Farm Forestry / Agro Forestry

- 7.1 Introduction
- 7.2 Types of Agro-Forestry
- 7.3 Selection of Tree Species
- 7.4 Management of Agro-Forestry
- 7.5 Felling and New Plantation
- 7.6 Disposal and Marketing

Unit 8 : Production of Farm Animals

- 8.1 Introduction
- 8.2 Types of Farm Animals Based on Their Primary Use
- 8.3 Systems of Livestock Production
- 8.4 Problems in Animal Production
- 8.5 Conservation of good quality Breeds Through Genetic Means

Unit 9 : Dairy Industry

- 9.1 Introduction and Scope of Dairy in Pakistan
- 9.2 Different Types of Dairy Industries in Pakistan
- 9.3 Problems of Dairy Industry
- 9.4 Effect of Diseases on Animal Production
- 9.5 Quality of Milk
- 9.6 Scope and Future of Dairy Industry in Pakistan
- 9.7 Promotion and Improvement in Dairy Products

Unit 10 : Poultry Husbandry

- 10.1 Introduction
- 10.2 Contribution to National Economy
- 10.3 Types of Poultry Farming
- 10.4 Poultry Feed Quality
- 10.5 Types of Feed
- 10.6 Poultry Diseases
- 10.7 Handling and Processing of Poultry Products
- 10.8 Marketing of Poultry Products

Prescribed Book: **Agriculture Science (Tech) for Part – I (Class –IX) (9th)**
Authors: Professor Dr. Muhammad Jafar Jaskani, Institute of Horticultural Sciences, University of Agriculture, Faisalabad.

Dr. Muhammad Sohail-ur-Raza, Project Director Sugarcane, Agriculture Department Punjab, Lahore.
Publisher: Punjab Curriculum and TextBook Board, Lahore
Printer: Nadeem Younis Printers, Lahore.



HEALTH SCIENCES

Theory Part – I	40 Marks
Theory Part– II	40 Marks
Practical – I	35 Marks
Practical - II	35 Marks
Total	150 Marks

Part-I (Class-IX)	Marks: 40	Time: 1:30 Hours
--------------------------	------------------	-------------------------

Chapter 1 : Introduction to Health Sciences

- 1.1 Health and illness
- 1.2 Types of Diseases
- 1.3 Healthcare System in Punjab
- 1.4 Key Health Indicators
- 1.5 Punjab Government Health Initiatives
- 1.6 Careers in Health Sciences

Chapter 2 : Gastrointestinal System

- 2.1 Functions of Gastrointestinal System
- 2.2 Interaction of GI System with other Systems
- 2.3 Common Gastrointestinal Disorders
- 2.4 Infectious Diseases of the GI Tract
- 2.5 Preventive Measures for GI Infections
- 2.6 Diagnostic and Therapeutic Approaches

Chapter 3 : Respiratory System

- 3.1 Function of Respiratory System
- 3.2 Common Respiratory Disorders
- 3.3 Infectious Diseases of the Respiratory System
- 3.4 Diagnostic and Treatment Methods
- 3.5 Vaccination and Smoking Cessation

Chapter 4 : Circulatory System

- 4.1 Function of the Circulatory System
- 4.2 Common Cardiovascular Disorders
- 4.3 Diagnostic Tests
- 4.4 Prevention of Cardiovascular Diseases

Chapter 5 : Urinary System

- 5.1 The Urinary System
- 5.2 Common Urinary Disorders
- 5.3 Kidney Diseases
- 5.4 Treatment of Kidney Failure
- 5.5 Diagnostic Tests for Diseases of Urinary System
- 5.6 Interpreting Lab Results for Kidney Function

Chapter 6 : First Aid-I

- 6.1 Introduction to First Aid
- 6.2 Basic Life Support (BLS) and CPR
- 6.3 Wounds and Bleeding
- 6.4 Fractures, Sprains and Strains
- 6.5 Departments / Organizations Providing First Aid

Chapter 7 : Physical Education

- 7.1 Introduction to Physical Education
- 7.2 Exercise and Cardiovascular Health
- 7.3 Weight Management and Metabolic Health
- 7.4 Sports Injuries and First aid Management

- 7.5 Key Risks During Physical Activity
- 7.6 Developing Exercise Routine
- 7.7 Importance of Proper Posture & Techniques

Chapter 8 : Nutrition

- 8.1 Introduction to Nutrition
- 8.2 International Dietary Guidelines
- 8.3 Pakistan Dietary Guidelines
- 8.4 Diet-Related Chronic Diseases
- 8.5 Malnutrition
- 8.6 Iron and Vitamin Deficiencies

Prescribed Book: **Health Sciences for Part – I (Class –IX) (9th)**
Authors: Professor Muhammad Nadeem Asghar, Director, Office of
DPI (Colleges), Punjab, Lahore.

Dr. Zain Rasool, Demonstrator, Institute of Public Health,
Lahore.

Dr. Abdul Rehman, Deputy Secretary (Technical),
Specialized Healthcaer and Medical Education Department,
Lahore.
Publisher: Punjab Curriculum and TextBook Board, Lahore
Printer: Nadeem Younis Printers, Lahore.



INFORMATION & COMMUNICATION TECHNOLOGY (TECH)

Theory Part – I	40 Marks
Theory Part– II	40 Marks
Practical – I	35 Marks
Practical - II	35 Marks
Total	150 Marks

Part-I (Class-IX)	Marks: 40	Time: 1:30 Hours
--------------------------	------------------	-------------------------

Chapter 1 :Mastering Microsoft Word and Powerpoint

- 1.1 Getting started with Microsoft Word
- 1.2 Creating a New Document
- 1.3 Understanding the Word Interface
- 1.4 Home Tab
- 1.5 Insert Tab
- 1.6 Layout Tab
- 1.7 View Tab
- 1.8 Getting Started with PowerPoint
- 1.9 Understanding the PowerPoint Interface
- 1.10 Home Tab
- 1.11 Using Bullet Points and Numbering in PowerPoint
- 1.12 Aligning and Structuring Text in PowerPoint
- 1.13 Applying layouts, Themes, and backgrounds
- 1.14 Insert Tab
- 1.15 Using SmartArt
- 1.16 Inserting Tables and Charts
- 1.17 Transitions and Animations

Chapter 2 : Exploring Arduino Basics-Circuits, Code and Projects

- 2.1 Designing and Explaining Basic Circuits with Arduino
- 2.2 Key Components
- 2.3 Building a Basic Circuit
- 2.4 Installing the Arduino IDE
- 2.5 Writing a Simple Program to Blink an LED
- 2.6 Activating a Buzzer Using Arduino
- 2.7 Reading a Sensor (HC-SR04)
- 2.8 Simulating Traffic Lights
- 2.9 Troubleshooting Projects
- 2.10 Common Problems and Their Fixes

Chapter 3 : Graphic Designing and Multimedia

- 3.1 Getting Started with Graphic Design and Publishing
- 3.2 Using Basic Design Tools
- 3.3 Getting Start with Capcut
- 3.4 Managing Digital and Print Media

Chapter 4 : Fundamentals of Web Development and e-Commerce

- 4.1 Introduction to Web Development
- 4.2 Motivation Behind Learning Web Development
- 4.3 Essential Tools and Environment Setup
- 4.4 Creating Web Pages with HTML
- 4.5 Enhancing Your Web Page with CSS Fundamentals
- 4.6 Enhancing Your Web Page with JavaScript Fundamentals
- 4.7 Introductions to e-Commerce

Chapter 5 : System Troubleshooting and Maintenance

- 5.1 Computer Maintenance
- 5.2 Device Driver Problems, Prevention and Recovery Methods
- 5.3 Hardware Troubleshooting
- 5.4 Troubleshooting Steps for Windows
- 5.5 IP Addressing: Configuration Issues and Solutions
- 5.6 Port Forwarding

Chapter 6 : AI Technologies

- 6.1 AI in Documentation and Content Creation
- 6.2 AI in Multimedia
- 6.3 AI in Coding and Automation
- 6.4 AI in Daily Life and Industries
- 6.5 Ethical Considerations in AI
- 6.6 Project (Build Your Own AI-Powered Tool)

Prescribed Book: **Information & Communication Technology (Tech) for Part – I (Class –IX) (9th)**

Authors: Professor Dr. Muhammad Atif Chattha , Dean faculty of Computer Science, Lahore Garrison University, Phase-6, DHA, Lahore

Dr.Arshad Ali , Associate Professor of Computer Science
HOD, Cyber Security Department, Fast School of Computing
National University of Computer&Emerging Sciences,
Lahore

Mr.Saqib Mahmood, Lecturer of Computer Science, Lahore
Garrison University, Phase-6, DHA, Lahore.

Publisher: Punjab Curriculum and TextBook Board, Lahore

Printer: Nadeem Younis Printers, Lahore.



COMMUNICATION SKILLS & PERSONAL GROOMING (TECH)

Theory Part – I	40 Marks
Theory Part– II	40 Marks
Practical - II	20 Marks
Total	100 Marks

Part-I (Class-IX)	Marks: 40	Time: 1:30 Hours
--------------------------	------------------	-------------------------

Chapter 1 : Introduction to Communication

- 1.1 Definition and Importance of Communication
- 1.2 Elements of Communication
- 1.3 Types of Communication

Chapter 2 Effective Communication Skills

- 2.1 Active Listening
- 2.2 Clarity and Conciseness: Getting Your Point Across
- 2.3 Communication Barriers

Chapter 3 : Non-Verbal Communication

- 3.1 Types of Non-Verbal Communication
- 3.2 The Silent Language-Understanding Body Language
- 3.3 Types of Gestures
- 3.4 Visual Communication
- 3.5 The Art of the Handshake
- 3.6 Combining Eye Contact and Handshakes

Chapter 4 : Written Communication Skills

- 4.1 Writing Skills: Parts of Speech
- 4.2 Writing Skills: Sentences
- 4.3 Paragraph
- 4.4 Etiquette of Writing Email

Chapter 5 : Confidence Building and Self-Presentation

- 5.1 Shyness and Social Anxiety
- 5.2 Impact of Shyness and Social Anxiety
- 5.3 Strategies for Managing Social Anxiety
- 5.4 A Personalized Action Plan for Managing Social Anxiety
- 5.5 Psychological Foundations of Self-Confidence
- 5.6 Factors that Undermine or Enhance Self-Confidence
- 5.7 Long-Term Benefits of Self-Confidence
- 5.8 Developing Routines and Habits to Foster Self-Confidence
- 5.9 Communication Styles that Convey Self-Confidence
- 5.10 Overcoming Setbacks
- 5.11 Understanding Communication Styles
- 5.12 Benefits of Assertive Communication
- 5.13 Consequences of Aggression and Passive Behaviour
- 5.14 Adjusting Behaviours or Language

Chapter 6 : Personal Grooming and Hygiene

- 6.1 Personal Hygiene
- 6.2 Hygiene Practices for Maintaining Cleanliness
- 6.3 Using Hygiene Products Effectively
- 6.4 Skin and Haircare Basics
- 6.5 Developing a Basic Skincare Routine
- 6.6 Effective Haircare Practices
- 6.7 Treatments for Specific Concerns
- 6.8 Dressing Appropriately for Different Occasions

6.9 Selecting Outfits for Various Occasions

Chapter 7 : Social Manners

7.1 Dining Etiquette

7.2 Use of Cutlery and Napkin

7.3 Groomed and Respectful Impression

7.4 Hosting and Attending Formal Events

7.5 Planning and Executing Formal Events

7.6 Cultural Sensitivity in Social Interactions

7.7 Cultural Awareness and Sensitivity

Chapter 8 : Professional Etiquette

8.1 Importance of Proper Manners

8.2 Greeting and Introducing Oneself

8.3 Telephone and Email Etiquette

Chapter 9 : Media and Digital Communication

9.1 Basics of Social Media Etiquette

9.2 Etiquette of Social Media interactions

9.3 Responsible Internet Usage

9.4 Practising Responsible Internet Habits

9.5 Impact of Digital Communication on Personal Image

9.6 Curating Digital Content for Positive Personal Image

9.7 Appropriate Language, Tone, and Visuals

9.8 Managing and Auditing Online Profiles

Prescribed Book: **COMMUNICATION SKILLS & PERSONAL GROOMING (TECH)
for Part – I (Class –IX) (9th)**

Authors: Mr. Suhail Bin Aziz, Director, National Rahmatul-lil-
Aalameen Wa Khatmun Nabiyyin Authority, Ministry of
Federal Education and Professional Training, Islamabad.

Mr. Atif Mahmood, Skills Development And Employment
Promotion Expert, working in development sector.

Publisher: Punjab Curriculum and TextBook Board, Lahore

Printer: Nadeem Younis Printers, Lahore.



GENERAL SCIENCE (TECH)

Theory Part – I	50 Marks
Theory Part– II	50 Marks
Total	100 Marks

Part-I (Class-IX)	Marks: 50	Time: 1:30 Hours
--------------------------	------------------	-------------------------

Chapter 1 : Introduction and Role of Science

- | | |
|--|---------------------------------|
| 1.1 History of Science | 1.2 Concept of Science in Islam |
| 1.3 Contribution of Muslim and Pakistani Scientists. | |
| 1.4 Branches of Science | |
| 1.5 Role of Science and Technology in our Life | |

Chapter 2 : Our Life and Chemistry

- | | |
|--------------------------------------|---------------------------------|
| 2.1 The Basic Building Elements Life | |
| 2.2 Organic Chemistry | 2.2 Water |
| 2.4 Air | 2.5 Important Elements for Life |

Chapter 3 : Biochemistry and Biotechnology

- | | |
|--|-------------------------|
| 3.1 Metabolism | 3.2 Enzymes |
| 3.3 Blood and its Functions | 3.4 Genetic Engineering |
| 3.5 The Role of Biotechnology in Betterment of Crops | |
| 3.6 Antibiotics and Vaccines | |
| 3.7 Recycling of Waste and Scarce Materials | |

Chapter 4 : Human Health

- | | |
|---|---------------|
| 4.1 Food and its Major Components | |
| 4.2 Balanced Diet | |
| 4.3 Co-ordination and Integration in Body Functions | |
| 4.4 Exercise and Health | 4.5 First Aid |

Chapter 5 : Diseases-Cause and Prevention

- | | |
|--|-----------------------------|
| 5.1 Diseases Caused by Germs | |
| 5.2 Agents Spreading the Germs | |
| 5.3 Harmful Effects of Smoke and Smoking | |
| 5.4 Mental Diseases | 5.5 Drugs and their Effects |

Chapter 6 : Environment and Natural Resources

- | | |
|---|---------------------------------|
| 6.1 Depletion of Ozone Layer | 6.2 Environmental Pollution |
| 6.3 Minerals and Fossil Fuels | |
| 6.4 Agriculture and Crops of Pakistan | |
| 6.5 Dairy and Poultry Farming | 6.6 Wildlife and National Parks |
| 6.7 Effects of Rising Population on Environment | |

Prescribed Book:**GENERAL SCIENCE (TECH) for Part – I (Class –IX) (9th)****Authors:**

*Prof.Nazir Ahmad Chughtai	*Prof.Dr Javed Iqbal
*Prof.Dr Ejaz Rasool	*Dr.Mahmood-ul- Hasan
*Dr.Capt.(R) Muhammad Akhtar	*Prof.Muhammad Nisar
*Prof.Mrs.Rizwana Cheema	*Prof.(R) Surriya Usmani
*Mr.Aamir Riaz	

Publisher:

Punjab Curriculum and TextBook Board, Lahore

Printer:

Nadeem Younis Printers, Lahore.



CHEMISTRY (TECH)

Theory Part – I	40 Marks
Theory Part– II	40 Marks
Practical Part– II	20 Marks
Total	100 Marks

Part-I (Class-IX)**Marks: 40****Time: 1:30 Hours****Chapter 1 : States of Matter and Phase Changes**

- 1.1 What is Chemistry?
- 1.2 Differences between Elements, Compounds and Mixtures
- 1.3 Allotropic Forms of Substances
- 1.4 Solution, Colloidal Solution and Suspension
- 1.5 Effect of Temperature on the Solubility of Solutes

Chapter 2 : Atomic Structure

- 2.1 Structure of Atom
- 2.2 Atomic Number and Mass Number
- 2.3 Relative Atomic Mass

Chapter 3 : Chemical Bonding

- 3.1 Why do atoms form chemical bonds?
- 3.2 Chemical Bond
- 3.3 Types of Bonds
- 3.4 Electropositive Character of Metals
- 3.5 Electronegative character of Non-metals
- 3.6 Compare the properties of ionic and covalent compounds.
- 3.7 Nature of Bonding and Properties

Chapter 4 : Stoichiometry

- 4.1 Chemical formula
- 4.2 Empirical Formula
- 4.3 Chemical Formulas of Binary Ionic Compounds
- 4.4 Chemical Formulas of Compounds
- 4.5 Avogadro's Number (N_A)
- 4.6 The Mole and Molar Mass
- 4.7 Chemical Equations and Chemical Reactions
- 4.8 Calculations Based on Chemical Equation

Chapter 5 : Energetics

- 5.1 System and Surrounding
- 5.2 Enthalpy
- 5.3 Exothermic and Endothermic Reactions
- 5.4 How does a Reaction take place?

Chapter 6 : Equilibria

- 6.1 Reversible and Irreversible Changes
- 6.2 Dynamic Equilibrium
- 6.3 Changing the Physical Conditions of a Chemical Reaction

Chapter 7 : Acid Base Chemistry

- 7.1 Acids and Bases
- 7.2 Different Concepts of Acids and Bases
- 7.3 Bronsted – Lowry concepts of Acids and Bases
- 7.4 Properties of Acids and Base

Chapter 8 : Periodic Table and Periodicity

- 8.1 Modern Periodic Table
- 8.2 Salient Features of Modern Periodic Table

- 8.3 Similarities in the Chemical Properties of Elements in the Same Group
- 8.4 Variation of Periodic Properties in Periods and Groups
- 8.5 Metallic Character and Reactivity

Chapter 9 : Group Properties and Elements

- 9.1 Properties of Group 1 Elements
- 9.2 Properties of Group 17 Elements
- 9.3 Properties of Noble Gases
- 9.4 Physical Properties of Metals and Non-metals

Chapter 10 : Environmental Chemistry

- 10.1 Air Pollutants
- 10.2 Acid Rain
- 10.3 Global Warming (Greenhouse Effect)
- 10.4 Strategies to Reduce Environmental Issues

Chapter 11 : Hydrocarbons

- 11.1 Hydrocarbons
- 11.2 Alkanes
- 11.3 Preparation of Alkanes
- 11.4 Important Reactions

Chapter 12 : Laboratory and Practical Skills

- 12.1 Chemical Hazards in the Laboratory
- 12.2 Hazard Signs
- 12.3 Personal Protective Equipment (PPE) in the Laboratory
- 12.4 Location of Fire Extinguisher
- 12.5 Emergency Situation in the Lab

Prescribed Book: CHEMISTRY (TECH) for Part – I (Class –IX) (9th)
Authors: *Prof Dr. Abid Zia (PHD Organic Chemistry)
University Of East Anglia Norwich United Kingdom
Publisher: Punjab Curriculum and TextBook Board, Lahore
Printer: Nadeem Younis Printers, Lahore.



PHYSICS (TECH)

Theory Part – I	40 Marks
Theory Part– II	40 Marks
Practical Part– II	20 Marks
Total	100 Marks

Part-I (Class-IX)**Marks: 40****Time: 1:30 Hours****Chapter 1 : Physical Quantities and Measurements**

- 1.1 Scope of Physics
- 1.2 Physical and Non-Physical Quantities
- 1.3 Base and Derived Physical Quantities
- 1.4 International System of Units
- 1.5 Scientific Notation
- 1.6 Errors in Measurements
- 1.7 Uncertainty in a Measurement
- 1.8 Significant Figures
- 1.9 Precision and Accuracy
- 1.10 Rounding off the Digits

Chapter 2 : Kinematics

- 2.1 Scalars and Vectors
- 2.2 Rest and Motion
- 2.3 Distance and Displacement
- 2.4 Speed and Velocity
- 2.5 Acceleration
- 2.6 Graphical Analysis of Motion
- 2.7 Gradient of a Distance-Time Graph
- 2.8 Speed-Time Graph
- 2.9 Gradient of a Speed-Time Graph
- 2.10 Area Under Speed-Time Graph
- 2.11 Solving Problems for Motion Under Gravity
- 2.12 Free Fall Acceleration

Chapter 3 : Dynamics

- 3.1 Concept of Force
- 3.2 Forces in a Free-Body Diagram
- 3.3 Newton's Laws of Motion
- 3.4 Mass and Weight
- 3.5 Friction
- 3.6 Momentum and Impulse
- 3.7 Principle of Conservation of Momentum

Chapter 4 : Turning Effects of Force

- 4.1 Like and Unlike Parallel Forces
- 4.2 Addition of Forces
- 4.3 Turning Effect of a Force
- 4.4 Resolution of Vectors
- 4.5 Determination of a Force from its Perpendicular Components
- 4.6 Principle of Moments
- 4.7 Centre of Gravity and Centre of Mass
- 4.8 Equilibrium
- 4.9 Conditions of Equilibrium
- 4.10 States of Equilibrium
- 4.11 Improvement of Stability

4.12 Application of Stability in Real Life

4.13 Centripetal Force

Chapter 5 : Work, Energy And Power

5.1 Work

5.2 Energy

5.3 Conservation of Energy

5.4 Renewable and Non-Renewable Sources

5.5 The Advantages and Disadvantages of Method of Energy Production

5.6 Power

5.7 Efficiency

Chapter 6 : Mechanical Properties of Matter

6.1 Deformation of Solids

6.2 Hooke's Law

6.3 Density

6.4 Pressure

6.5 Pressure in Liquids

6.6 Atmospheric Pressure

6.7 Measurement of Atmospheric Pressure

6.8 Measurement of Pressure by Manometer

6.9 Pascal's Law

Chapter 7 : Thermal Properties of Matter

7.1 Kinetic Molecular Theory of Matter

7.2 Temperature and Heat

7.3 Thermometers

7.4 Sensitivity, Range and Linearity of Thermometers

Chapter 8 : Magnetism

8.1 Magnetic Materials

8.2 Induced Magnetism

8.3 Temporary and Permanent Magnets

8.4 Magnetic Fields

8.5 Uses of Permanent Magnets

8.6 Electromagnets

8.7 Magnetisation and Demagnetisation

8.8 Applications of Magnets in Recording Technology

8.9 Soft Iron as Magnetic Shield

Prescribed Book: **PHYSICS (TECH) for Part – I (Class –IX) (9th)**
Authors: Professor (Rtd.) Muhammad Nisar
Publisher: Punjab Curriculum and TextBook Board, Lahore
Printer: Nadeem Younis Printers, Lahore.



BIOLOGY (TECH)

Theory Part – I	40 Marks
Theory Part– II	40 Marks
Practical Part– II	20 Marks
Total	100 Marks

Part-I (Class-IX)	Marks: 40	Time: 1:30 Hours
--------------------------	------------------	-------------------------

Chapter 1 : The Science of Biology

- | | |
|---|--------------------------------|
| 1.1 Biology and its Branches | 1.2 Careers in Biology |
| 1.3 Scientific Method | 1.4 Theory and Law (Principle) |
| 1.5 Malaria – An Example of Biological Method | |

Chapter 2 : Biodiversity

- | | |
|---------------------------------------|---------------------------------|
| 2.1 Biodiversity | 2.2 Classification |
| 2.3 Taxonomic Ranks | 2.4 Domains of Living Organisms |
| 2.5 Classification of Domain Eukarya | |
| 2.6 Status of Virus in Classification | |
| 2.7 Binomial Nomenclature | |

Chapter 3 : The Cell

- | | |
|---|-----------------------|
| 3.1 Cell | 3.2 Structure of Cell |
| 3.3 Structural Advantages of Plant and Animal Cells | |

Chapter 4 : Cell Cycle

- | | | |
|--|-------------|-------------|
| 4.1 Cell Cycle | 4.2 Mitosis | 4.3 Meiosis |
| 4.4 Comparison between Meiosis and Mitosis | | |

Chapter 5 : Tissues, Organs and Organ Systems

- | | |
|----------------------------|-------------------------|
| 5.1 Levels of Organization | 5.2 Stomach as an Organ |
| 5.3 Leaf as an Organ | |

Chapter 6 : Enzymes

- | | |
|--------------------------------|-------------|
| 6.1 Metabolism | 6.2 Enzymes |
| 6.3 Mechanism of Enzyme Action | |

Chapter 7 : Bioenergetics

- | | |
|-------------------------------------|--------------------------|
| 7.1 ATP: The Cell's Energy Currency | |
| 7.2 Photosynthesis | 7.3 Cellular Respiration |

Chapter 8 : Plant Physiology

- | | |
|-------------------------------------|-------------------|
| 8.1 Transport in Plants | 8.2 Transpiration |
| 8.3 Transport of Water in Plants | |
| 8.4 Translocation of Food in Plants | |
| 8.5 Osmotic Adjustments in Plants | |

Chapter 9 : Reproduction in Plants

- | | |
|-----------------------------------|----------------------------|
| 9.1 Vegetative propagation | 9.2 Artificial Propagation |
| 9.3 Sexual Reproduction in Plants | |

Prescribed Book: BIOLOGY (TECH) for Part – I (Class –IX) (9th)

Authors: Dr. Raheela Nadeem (Registrar / Professor UBAS, Lahore)
 Dr. Robeela Shabbir (SS Biology PCTB, Lahore)
 Dr. Adnan Ahmad Rana (Senior Research Officer PCSIR, Lhr)
 Mr. Zunnorain Ahmed (Consultant Biology, PCTB, Lahore)
 Muhammad Naveed Asghar (Senior Biology Teacher, LGS, Lhr)

Publisher: Punjab Curriculum and TextBook Board, Lahore**Printer:** Nadeem Younis Printers, Lahore.

COMPUTER SCIENCE AND ENTREPRENEURSHIP (TECH)

Part-I	50 Marks
Part-II	50 Marks
Practical	50 Marks
Total	150 Marks

Part-I (Class-IX)	Marks: 50	Time: 2:00 Hours
UNIT 1:	INTRODUCTION TO SYSTEMS	
	Introduction	
1.1	Theory of Systems	1.2 Systems and Science
1.3	Computer as a System	1.4 Computing Systems
UNIT 2:	NUMBER SYSTEMS	
	Introduction	
2.1	Numbering Systems	
2.2	Data representation in Computing Systems	
2.3	Storing Real Values in Computer Memory	
2.4	Binary Arithmetic Operations	
2.5	Common Text Encoding Schemes	
2.6	Storing Images, Audio and Video in Computers	
UNIT 3:	DIGITAL SYSTEMS AND LOGIC DESIGN	
	Introduction	
3.1	Basics of Digital Systems	
3.2	Boolean Algebra and Logic Gates	
3.3	Simplification of Boolean Functions	
3.4	Creating Logic Diagrams	
UNIT 4:	SOFTWARE SYSTEM	
	Introduction	
5.1	Software	
5.2	Introduction to System Software	5.3 Application Software
UNIT 5:	INTRODUCTION TO COMPUTER NETWORKS	
	Introduction	
5.1	Network as a System	
5.2	Fundamental Concepts in Data Communication	
5.3	Networking Devices	5.4 Network Topologies
5.5	Transmission Modes	5.6 The OSI Networking Model
5.7	Real-World Applications of Computer Networks	
UNIT 6:	COMPUTATIONAL THINKING	
	Introduction	
6.1	Definition of Computational Thinking	
6.2	Principles of Computational Thinking	
6.3	Algorithm Design Methods	6.4 Algorithmic Activities
6.5	Dry Run	
6.6	Introduction to LARP (Logic of Algorithms for Resolution of Problems)	
6.7	Error Identification and Debugging	
UNIT 7:	DATA SCIENCE AND DATA GATHERING	
	Introduction	
7.1	Data	7.2 Data Types
7.3	Organising and Analysing Data	7.4 Data Types
UNIT 8:	EMERGING TECHNOLOGIES IN COMPUTER SCIENCE	
	Introduction	
8.1	Introduction to Artificial Intelligence (AI)	
8.2	AI Algorithms and Techniques	

- UNIT 9:** 8.3 Introduction to Internet of Things (IoT)
ETHICAL, SOCIAL AND LEGAL CONCERNS IN COMPUTER USAGE
 Introduction
 9.1 Responsible Computer Usage
 9.2 Safe and Secure Operation of Digital Platforms
 9.3 Best Practices in Online Behavior
 9.4 Legal and Ethical Frameworks
 9.5 Intellectual Property Rights 9.6 Responsible Internet Use
 9.7 Impact of Computing on Society
- UNIT 10:** **ENTREPRENEURSHIP IN DIGITAL AGE**
 Introduction
 10.1 Entrepreneurship
 10.2 Entrepreneurship in the Digital Landscape
 10.3 Digital Tools and Platforms 10.4 Business Idea Generation
 10.5 Developing Business Plans
 10.6 Ethical and Sustainable Entrepreneurship

Prescribed Book: **COMPUTER SCIENCE AND ENTREPRENEURSHIP (TECH)**
for Part – I (Class –IX) (9th)

Authors: **Prof. Dr. Muhammad Atif,**
 (Phd Computer Science) Professor of Computer Science, Lahore
 Garrison University, Lahore

Prof. Dr. Syed Waqar Ul Qounain Jaffry,
 (Phd Computer Science) Chairman Dept. of IT, University of the
 Punjab, Allama Iqbal Campus (Old Campus) Shahrah-e-Quaid-e-
 Azam, Lahore.

Publisher: Punjab Curriculum and TextBook Board, Lahore

Printer: Nadeem Younis Printers, Lahore.



BOARD OF INTERMEDIATE & SECONDARY EDUCATION

86-MOZANG ROAD LAHORE



Type & Design by: Muhammad Ali Mughal, Junior Computer Operator, BISE Lahore, 03024181346