PUNJAB EDUCATION, CURRICULUM, TRAINING AND ASSESSMENT AUTHORITY
21- E-II, Gulberg-III, Lahore
No: PECTAA/C&C Unit/2025/326

Dated: 24.10.2025

PECTAA
Transformation, Innovation and Excellence

Director (C & C)

NOTIFICATION

In accordance with the approval granted by the Academics Committee of the Punjab Education, Curriculum, Training and Assessment Authority in its 7th meeting held on 23.10.2025, the Pairing Schemes and Model Papers of Matric-Tech subjects for Grade-9 **(Annex-A)** are hereby notified for implementation across Punjab.

Director (Curriculum & Compliance)

CC:

1. PSO to the Minister, Government of the Punjab, School Education Department
2. PS to the Vice Chairperson, PECTAA / Parliamentary Secretary, School Education
3. PS to the Chairperson, Chief Minister Task Force for Examination & Assessment
4. PS to the Secretary, Government of the Punjab, School Education Department
5. PS to the Secretary, Government of the Punjab, Higher Education Department
6. PS to the Special Secretary, Government of the Punjab, SED
7. PS to the Special Secretary, Government of the Punjab, South Punjab, Multan
8. Staff Officer to the Chief Executive Officer, PECTAA
9. PS to all Managing Directors, PECTAA
10. PA to the Secretary, Punjab Boards Committee of Chairpersons (PBCC)
11. PS to the Chairperson, BISE (Lahore, Gujranwala, Rawalpindi, Sargodha, Faisalabad, Sahiwal, Multan, Dera Ghazi Khan and Bahawalpur)
12. PA to all Directors, PECTAA
13. PS to the Programme Director, PMIU
14. PS to Managing Director, Punjab Education Foundation
15. PS to the Chief Executive Officer, Punjab Education Initiatives Management Authority
16. PS to the Managing Director, Punjab Daanish Schools & Centres of Excellence Authority
17. PS to the DPI (Secondary Education), Punjab
18. PS to all Chief Executive Officers (Education), District Education Authorities, Punjab
19. Director (IT), PECTAA for uploading the Notification, Pairing Schemes and Model Papers of Matric-Tech subjects for Grade-9 on the website of PECTAA.
20. Office File

Annex-A

Punjab Education, Curriculum, Training & Assessment Authority
Pairing Scheme of Health Science Grade-9

The paper of Health Sciences for Grade-9 will consist of 40 marks.
Duration of the paper will be 2 hours.
(Objective Type = 15 minutes + Subjective Type = 1:45 hours)
Objective Type = 10 marks + Subjective Type = 30 marks.
The paper will be made as per following details:

OBJECTIVE TYPE	
Q.1: MULTIPLE CHOICE QUESTIONS	**10 Marks (1 mark each)**
Chapter # 1	1 MCQ
Chapter # 2	1 MCQ
Chapter # 3	1 MCQ
Chapter # 4	1 MCQ
Chapter # 5	1 MCQ
Chapter # 6	2 MCQ
Chapter # 7	2 MCQ
Chapter # 8	1 MCQ

OBJECTIVE TYPE (30 Marks)		
Part-II: Subjective:	**Q-2:** Four short answer questions have to be answered out of 6. The detail is as follows: 	**Chapter**	**1**	**2**	**3**	**4**
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No. of Short Questions per Chapter	1	1	2	2		2 × 4 = 8
	Q-3: Four short answer questions have to be answered out of 6. The detail is as follows: 	**Chapter**	**5**	**6**	**7**	**8**
---	---	---	---	---
No. of Short Questions per Chapter	1	2	2	1		2 × 4 = 8
Part-III: Subjective:	This section will contain three questions bifurcated in two-part **a & b** (carrying 4 & 3 marks respectively) and students have to attempt 2 questions. The detail is as follows: **Q-4:** 	**Chapter**	**1**	**3**
Part	a	b	 **Q-5:** 	**Chapter**	**4**	**6**
Part	a	b	 **Q-6:** 	**Chapter**	**7**	**8**
Part	a	b		2 × 7 = 14

MODEL PAPER OF HEALTH SCIENCES FOR GRADE-9
Objective Type

Time allowed: 15 Mins.   **Max. Marks: 10**

Note: Four possible answers A, B, C and D to each question are given. The choice which you think is correct, fill that circle with marker or pen ink in the answer-book. Cutting or filling two or more circles will result in zero mark in that question.

(i)   A person feels weak, but medical tests are normal. This is

     (a)   A disease   (b)   A disorder

     (c)   An illness   (d)   An infection

(ii)   Which diagnostic procedure uses flexible tube to examine the GI tract

     (a)   X-ray   (b)   Endoscopy

     (c)   MRI   (d)   CT scan

(iii)   What is the common symptom of tuberculosis

     (a)   Short term headache   (b)   Persistent cough lasting more than three weeks

     (c)   Skin rash   (d)   Increased appetite

(iv)   Which of the following is a risk factor for coronary artery disease

     (a)   Regular exercise   (b)   High cholesterol

     (c)   Low blood pressure   (d)   Healthy diet

(v)   Which lab result is most commonly elevated in both AKI and CKD

     (a)   Blood glucose   (b)   Serum creatinine

     (c)   Platelet count   (d)   Hemoglobin level

(vi)   What does the "D" stands for

     (a)   Diagnosis   (b)   Danger

     (c)   Delivery   (d)   Duration

(vii)   Which method is used for suspected muscle or tendon injury

     (a)   R.I.C.E   (b)   A.B.C

     (c)   D.R.A   (d)   I.C.E

(viii)   Which exercise primarily strengthens the core

     (a)   Squats   (b)   Push-ups

     (c)   Plank   (d)   Walking lunges

(xi) Which of the following can improve metabolic health

    (a) Regular exercise   (b) Poor diet

    (c) Lack of sleep   (d) Sedentary life style

(x) Pale skin and fatigue suggest a deficiency of

    (a) Vitamin A   (b) Calcium

    (c) Iron   (d) Protein

Subjective Type (Part-I)

Time allowed: 1.45 Hhrs.   **Max. Marks: 16**

Q. 2: Write short answers to any four (04) questions: **(2×4=8)**

(i) Differentiate between communicable and non-communicable diseases.

(ii) What are some preventive measures for cholera?

(iii) Discuss the symptoms and causes of asthma

(iv) Write the names of diagnostic methods used to evaluate lung function and respiratory conditions

(v) Write the risk factors for hypertension

(vi) What is an ECG and what does it measure

Q. 3: Write short answers to any four (04) questions: **(2×4=8)**

(i) What is urinalysis? What abnormalities in urine indicate diseases.

(ii) What does DRABC approach stand for in first aid?

(iii) What is the primary first aid for a person suffering from burns?

(iv) How does exercise contribute to weight management?

(v) What are the dangers of poor posture during exercise?

(vi) Differentiate between wasting and stunting.

Subjective Type (Part-II)

Note: Attempt any two questions.   **(14)**

Q. 4: (a) What are the functions of District Headquarters(DHQ) hospitals and teaching hospitals? **(4)**

    (b) Describe the role of pulmonary function test(PTF) and imaging techniques in diagnosing respiratory conditions. **(3)**

Q. 5: (a) Describe the function of heart. **(4)**

    (b) Discuss the different type of wounds and their appropriate first aid. **(3)**

Q. 6: (a) Describe the significance of the RICE method in managing sports injuries? **(4)**

    (b) What is anemia? Explain its causes, symptoms, effects on body and how it can be prevented. **(3)**

Punjab Education, Curriculum, Training & Assessment Authority

INSTRUCTIONS FOR PREPARATION OF EXAM PAPER OF AGRICULTURE SCIENCE FOR GRADE-9

ESSENTIAL INSTRUCTIONS FOR PAPER SETTERS

The paper of Agriculture Sciences for Grade-9 will consist of 40 marks.

Duration of the paper will be 2 hours.

(Objective Type = 15 minutes + Subjective Type = 1:45 hours)

Objective Type = 10 marks + Subjective Type = 30 marks.

The paper will be made as per following details:

Part-I: Objective:	**Q-1:** 10 Multiple-Choice Questions (MCQs) will be developed from the entire content of the textbook. One MCQ will be asked from each chapter.	(1 × 10) = 10
Part-II: Subjective:	This section will contain two short answer questions. Each short answer question will be asked from the exercises of the textbook. The detail is as follows: **Q-2:** 4 short answer questions have to be answered out of 6. The detail is as follows: • One short answer question should be asked from each of chapters 1, 2, 3 and 4. • Two short answer questions should be asked from chapter 5.	(2 × 4) = 8
	Q-3: 4 short answer questions have to be answered out of 6. The detail is as follows: • One short answer question should be asked from each of chapters 6, 7, 8 and 9. • Two short answer questions should be asked from chapter 10.	(2 × 4) = 8
Part-III: Subjective:	This section will contain three detailed questions and students have to attempt two questions carrying 7 marks each. Each detailed question will be asked form the exercises of the textbook. The detail is as follows: **Q-4:** One detailed question will be asked either from Chapter 1 or Chapter 2 or Chapter 3. **Q-5:** One detailed question will be asked either from Chapter 4 or Chapter 5 or Chapter 6 or Chapter 7. **Q-6:** One detailed question will be asked either from Chapter 8 or Chapter 9 or Chapter 10.	(2 × 7) = 14

MODEL PAPER OF AGRICULTURE SCIENCE FOR GRADE-9

OBJECTIVE

Total Marks: 10   **Class: 9ᵗʰ**   **Time Allowed: 15 mins**

Q 1: Choose the correct option.   **(1 × 10 = 10)**

i.   Which of the following is a major constraint in Pakistani agriculture?

    a. Excessive rainfall   b. Water scarcity   c. Over-irrigation   d. Lack of labor

ii.   Which crop is known for adding nitrogen to the soil?

    a. Wheat   b. Rice   c. Legumes (e.g., beans peas)   d. Cron

iii. Which crop is grown during the kharif season?

    a. Wheat   b. Barley   c. Rice   d. Mustard

iv.   What is the main benefit of intercropping?

    a. Increase soil erosion   b. Reduces biodiversity

    b. c. Requires less labor   d. Optimizes resource use and reduces

v.   What is the role of afforestation in watershed management?

    a. Increase soil erosion   b. Reduce groundwater recharge

    c. Stabilize soil and improve water retention   d. Promote desertification

vi.   Which of the following is a mechanical method to control soil erosion?

    a. Mulching   b. Terracing   c. Crop rotation   d. Agroforestry

vii. What is the main purpose of agroforestry?

    a. To grow only trees for timber

    b. b. To combine trees, crops, and livestock for sustainable farming

    c. c. To replace all crops with trees

    d. d. To focus only on livestock farming

viii. Which of the following is a problem in animal marketing?

    a. High demand for livestock products   b. Dominance of middlemen

    c. Excessive use of modern technology   d. Overproduction of fodder

ix.   Which dairy product is made by fermenting milk?

    a. Butter   b. Cheese   c. Yogurt   d. Ghee

x.   Which of the following is a fancy bird?

    a. Broiler Chicken   b. Silkie chicken   c. Layer hen   d. Turkey

MODEL PAPER OF AGRICULTURE SCIENCE FOR GRADE-9

SUBJECTIVE

Total Marks: 30   **Class: 9ᵗʰ**   **Time Allowed: 1:45 hrs**

Part - II

Q 2: Write the answers to any four (04) short questions.   **(2 x 4 = 8)**

  i.   What is the role of poultry farming in Pakistan's economy?

  ii.   What is the main challenge of farming in arid regions of Pakistan?

  iii.   Why cotton is called "white gold"?

  iv.   What is the role of market demand in determining cropping patterns?

  v.   What is soil degradation?

  vi.   How does mulching contribute to soil and water conversation?

Q 3: Write the answers to any four (04) short questions.   **(2 x 4 = 8)**

  i.   What is the purpose of installing drainage systems in waterlogged soils?

  ii.   What is the purpose of riparian buffers in agroforestry?

  iii.   How does climate change affect fodder availability?

  iv.   What are the benefits of value addition in dairy products?

  v.   Why is proper feed storage important in poultry farming?

  vi.   What is the role of vaccination in preventing poultry disease?

Part - III

Note: Attempt any two (02) long questions.

Q. 4: Describe the steps involved in the production of rice, from land preparation to post-harvest management.   **(07)**

Q. 5: Discuss the causes of soil erosion, and describe agronomic and mechanical practices to control it.   **(07)**

Q. 6: Explain the challenges faced by the dairy industry in Pakistan and suggest measures to overcome them.   **(07)**

Punjab Education, Curriculum, Training & Assessment Authority

INSTRUCTIONS FOR PREPARATION OF EXAM PAPER OF FASHION DESIGNING FOR GRADE-9

ESSENTIAL INSTRUCTIONS FOR PAPER SETTERS

The paper of Fashion Designing for Grade-9 will consist of 40 marks.

Duration of the paper will be 2 hours.

(Objective Type = 15 minutes + Subjective Type = 1:45 hours)

Objective Type = 10 marks + Subjective Type = 30 marks.

The paper will be made as per following details:

Part-I: Objective:	**Q-1:** 10 Multiple-Choice Questions (MCQs) will be developed from the entire content of the textbook. One MCQ will be asked each from chapter except chapter 5 from which two MCQs will be asked.	(1 × 10) = 10
Part-II: Subjective:	This section will contain two short answer questions. Each short answer question will be asked from the exercises of the textbook. The detail is as follows: **Q-2:** 4 short answer questions have to be answered out of 6. The detail is as follows: • One short answer question should be asked from each of chapters 1, 2, 3 and 4. • Two short answer questions should be asked from chapter 5.	(2 × 4) = 8
	Q-3: 4 short answer questions have to be answered out of 6. The detail is as follows: • One short answer question should be asked from each of chapters 6 and 8. • Two short answer questions should be asked from each of chapters 7 and 9.	(2 × 4) = 8
Part-III: Subjective:	This section will contain three detailed questions and students have to attempt 2 questions carrying 7 marks each. Each detailed question will be asked form the exercises of the textbook. The detail is as follows: **Q-4:** One detailed question will be asked either from Chapter 1 or Chapter 2 or Chapter 3. **Q-5:** One detailed question will be asked either from Chapter 4 or Chapter 6 or Chapter 7. **Q-6:** One detailed question will be asked either from Chapter 5 or Chapter 8 or Chapter 9.	(2 × 7) = 14

MODEL PAPER OF FASHION DESIGNING
FOR GRADE-9
Objective (Part-I)

Time Allowed: 15 mins.   **Max. Marks: 10**

Q. 1: Attempt all questions:

(i)   How does fashion help the economy?
a) No impact on the economy   b) Creates jobs in design and retail
c) Only benefits rich designers   d) Only affects celebrities

(ii)   Hue refers to which color family
a) red, blue, green   b) red, blue, yellow
c) red, blue, purple   d) red, blue, pink

(iii)   Rhythm in design creates a sense of:
a) stability   b) movement and flow
c) randomness   d) proportion

(iv)   What kind of headdresses they used to wear?
a) large and decorative   b) small and delicate
c) soft and luxurious   d) none of the above

(v)   What is the meaning of Phulkari?
a) land of flowers   b) flower work
c) a type of color   d) a part of the flower

(vi)   Which is the best description for the technique of Ajrak?
a) block printed geometric shapes   b) tie and die abstract shapes
c) needlework in floral shapes   d) freehand drawing

(vii)   What does anatomy help artists achieve?
a) abstract shapes   b) realistic figures
c) garment colours   d) avoids movement

(viii)   The Peter Pan collar is best known for:
a) its sharp and pointed shape   b) its stand-up, stiff look
c) its rounded and soft edges   d) its long, folded-back lapels

(ix)   Which of the following is an animal-based fiber?
a) polyester   b) cotton
c) silk   d) linen

(x)   Which tool is used to measure fabric accurately?
a) scissors   b) measuring tape
c) seam ripper   d) pin cushion

Subjective (Part-II)

Q2. Answer any four of the following short questions. (2x4=8)

(i) What does SDG stand for?

(ii) Why is texture important in design?

(iii) How does movement influence a composition?

(iv) Which civilization had its influence on the Gandhara Civilization?

(v) Define culture and craft.

(vi) What type of cap or headgear is worn by the people of Gilgit Baltistan?

Q3. Answer any four of the following short questions. (2x4=8)

(i) Name three basic geometric shapes used in drawing.

(ii) How many heads tall is a fashion figure, and why is it elongated?

(iii) Identify and describe three common sleeve styles.

(iv) Why is cotton important for Pakistan's economy?

(v) How does a backstitch differ from a running stitch?

(vi) Name any two natural and synthetic fabrics?

Subjective (Part-II)

Attempt any two questions in detail from the following. (2x7=14)

Q4. What are some real-world examples of designs that showcase an innovative use of the elements of design?

Q5. How does using perspective create a sense of depth in a drawing, and what are the different types of perspective?

Q6. Identify and compare different types of cotton fabrics. Discuss the uses of each type in everyday clothing and textiles.

Punjab Education, Curriculum, Training & Assessment Authority

> **INSTRUCTIONS FOR PREPARATION OF EXAM PAPER OF INFORMATION & COMMUNICATION TECHNOLOGIES (ICT) FOR GRADE-9**

> **ESSENTIAL INSTRUCTIONS FOR PAPER SETTERS**

The paper of Information & Communication Technologies (ICT) for Grade-9 will consist of 40 marks.

Duration of the paper will be 2 hours.

(Objective Type = 15 minutes + Subjective Type = 1:45 hours)

Objective Type = 10 marks + Subjective Type = 30 marks.

The paper will be made as per following details:

Part-I: Objective:	**Q-1:** 10 Multiple Choice Questions (MCQs) will be developed from the entire content of the text book. Two MCQs will be asked from each of Chapters 1, 2, 4, and 6, while one MCQ will be asked from each of Chapters 3 and 5.	$1 \times 10 = 10$
Part-II: Subjective:	This section will contain two short answer questions. Each short answer question will be asked from the exercises of the textbook. The detail is as follows:	
	Q-2: 4 short answer questions have to be answered out of 6. The detail is as follows: • Two short answer questions will be asked from each of chapter No. 1, 2 and 3.	$2 \times 4 = 8$
	Q-3: 4 short answer questions have to be answered out of 6. The detail is as follows: • Two short answer questions will be asked from each of chapter No. 4, 5 and 6.	$2 \times 4 = 8$
Part-III: Subjective:	This section will contain three detailed questions and students have to attempt two questions carrying 7 marks each. Each detailed question should be asked form the exercises of the textbook. The detail is as follows: **Q-4:** One detailed question will be asked from Chapter 2. **Q-5:** One detailed question will be asked from Chapter 4. **Q-6:** One detailed question will be asked either from Chapter 5 or Chapter 6.	$2 \times 7 = 14$

MODEL PAPER OF INFORMATION AND COMMUNICATION TECHNOLOGIES (ICT) FOR GRADE-9
OBJECTIVE (PART-I)

Max. Marks: 10   **Time Allowed: 15 mins**

Multiple Choice Questions (MCQ)

Q#1: Choose the correct option: **(1×10=10)**

i.   **What is the default file extension for a Microsoft Word Document?**

    a. .pptx   b. .txt   c. .docx   d. .xlsx

ii.   **CTRL+ Z in word and PowerPoint is used for:**

    a. Save   b. Copy   c. Redo   d. Undo

iii.   **In an Arduino sketch, which function runs only once when the program starts?**

    a. Setup()   b. loop()   c. run()   d. start()

iv.   **What is the multiplier for the color "Green" in the third band?**

    a. 10   b. 100   c. 100,000   d. 1,000,000

v.   **Which Canva template category is best for designing educational or event announcements to put on walls?**

    a. Whiteboard   b. Video   c. Poster   d. Website

vi.   **Which language provides the structure for a webpage?**

    a. CSS   b. JavaScript   c. HTML   d. Python

vii.   **Which tag is used to create a hyperlink in an HTML document?**

    a. <link>   b. <h>   c. <a>   d. <href>

viii.   **What is purpose of using a 220-ohm resister in LED circuit?**

    a. Increase Brightness   b. Protect LED from extensive Current
    c. Change LED color   d. Make the circuit faster

ix.   **Which AI tool is commonly used for grammar and spelling correction?**

    a. ChatGPT   b. Grammarly   c. QuillBot   d. DALL.E

x.   **Which AI tool can generate image from text description?**

    a. Canva   b. DALL.E   c. QuillBot   d. Zapier

MODEL PAPER OF INFORMATION AND COMMUNICATION TECHNOLOGIES (ICT) FOR GRADE-9
SUBJECTIVE

Max. Marks: 30   **Time Allowed: 1:45 hrs**

Subjective (PART-II)

Q#2: Write the answers to any four short questions.   **(2×4=8)**

   i.   Differentiate between header and footer in MS-Word.

  ii.   Define two ways to save a PowerPoint presentation.

 iii.   What is the function of a resistor in an Arduino circuit?

 iv.   What does the function pinMode(13, OUTPUT); do in an Arduino program?

  v.   List three types of designs you can create with Canva.

 vi.   Name two key design basics you should follow when making a poster.

Q#3: Write the answers to any four short questions.   **(2×4=8)**

   i.   How can CSS classes be used to style multiple elements at once?

  ii.   Write an HTML tag to display an image from a file named "photo.jpg"?

 iii.   How can malware be prevented?

 iv.   What is port forwarding?

  v.   How does AI help in Speech-to-text generation?

 vi.   How is AI used in the retail industry?

PART-III

Attempt any two long questions.

Q#4: What do you mean by Jumper Wires? Explain the different types of Jumper Wires.   **(07)**

Q#5: Explain the steps to setup an online store on Daraz to sell handmade keychains. Include at least four steps.   **(07)**

Q#6: What are the common software troubleshooting methods used when a computer fails to start properly?   **(07)**

Punjab Education, Curriculum, Training & Assessment Authority

INSTRUCTIONS FOR PREPARATION OF EXAM PAPER OF COMMUNICATION SKILLS & PERSONAL GROOMING FOR GRADE-9

ESSENTIAL INSTRUCTIONS FOR PAPER SETTERS

The paper of Communication Skills & Personal Grooming for Grade-9 will consist of 40 marks.

Duration of the paper will be 2 hours.

(Objective Type = 15 minutes + Subjective Type = 1:45 hours)

Objective Type = 10 marks + Subjective Type = 30 marks.

The paper will be made as per following details:

Part-I: Objective:	**Q-1:** 10 Multiple Choice Questions (MCQs) will be developed from the entire content of the textbook. One MCQ will be asked from each chapter except chapter 5 from which two MCQs will be asked.	**1 × 10 = 10**
Part-II: Subjective:	This section will contain two short answer questions. Each short answer question will be asked from the exercises of the textbook. The detail is as follows: **Q-2:** 4 short answer questions have to be answered out of 6. The detail is as follows: • One short answer question should be asked each from chapters 1, 2, 3 and 4. • Two short answer questions should be asked from chapter 5.	**2 × 4 = 8**
	Q-3: 4 short answer questions have to be answered out of 6. The detail is as follows: • One short answer question should be asked each from chapters 7 and 8. • Two short answer questions should be asked each from chapters 6 and 9.	**2 × 4 = 8**
Part-III: Subjective:	This section will contain three detailed questions and students have to attempt two questions carrying 7 marks each. Each detailed question will be asked form the exercises of the textbook. The detail is as follows: **Q-4:** One detailed question will be asked either from Chapter 1 or Chapter 2 or Chapter 3. **Q-5:** One detailed question will be asked either from Chapter 4 or Chapter 5 or Chapter 6. **Q-6:** One detailed question will be asked either from Chapter 7 or Chapter 8 or Chapter 9.	**2 × 7 = 14**

MODEL PAPER OF COMMUNICATION SKILLS AND PERSONAL GROOMING FOR GRADE-9

OBJECTIVE (PART-I)

Time Allowed: 15 mins.   **Max. Marks: 10**

Q. 1:   Multiple Choice Questions:

(i)   Which type of communication follows established rules and protocols?

    (a)   Non verbal   (b)   Written communication

(c)   formal communication   (d)   Informal communication

(ii)   Which means expressing your ideas in a way that is easy to understand and free form complicated language?

    (a)   Empathy   (b)   Clarity

    (c)   Consciousness   (d)   Paraphrasing

(iii)   Which of the following may be an example of haptics?

    (a)   Smiling   (b)   Shaking hands

    (c)   Maintaining eye contact   (d)   Leaning forward

(iv)   Which part of speech connects words, phrases, or clauses?

    (a)   Preposition   (b)   Conjunction

    (c)   Interjection   (d)   Article

(v)   Which type of communication involves expressing your thoughts and needs in a clear, direct and respectful way?

    (a)   Assertive communication   (b)   Passive communication

    (c)   Aggressive communication   (d)   Passive- aggressive communication

(vi)   We can build self-confidence by:

    (a)   setting small goals   (b)   seeking approval

    (c)   avoiding challenges   (d)   ignoring weaknesses

(vii)   The primary purpose of using sunscreen daily is to:

    (a)   protect skin from UV rays   (b)   improve skin texture and tone

    (c)   keep the skin moisturized   (d)   remove acne and freckles

(viii) A key element of dining etiquette in formal settings is:

    (a)   speaking loudly   (b)   using the table as one like

    (c)   using the proper cutlery   (d)   ignoring the table setting

(ix)   Which manners help to build a cooperative and respectful atmosphere where everyone feels valued and motivated?

    (a)   Professional etiquettes   (b)   Greeting

    (c)   First impression   (d)   Good workplace manners

(x)   One of the risks associated with irresponsible internet usage is:

    (a)   data breaches   (b)   increased followers

    (c)   more social media likes   (d)   faster internet speed

SUBJECTIVE (PART-II)

Q2. **Answer any four of the following short questions:** **(2 × 4 = 8)**

(i) What is encoding and decoding a message?

(ii) How can you review your communicative sentences?

(iii) How can facial expressions impact a conversation?

(iv) Explain the difference between an adjective and an adverb.

(v) How does negative self-talk impact self-confidence.

(vi) Differentiate between assertive and aggressive communication.

Q3. **Answer any four of the following short questions:** **(2 × 4 = 8)**

(i) Why is personal hygiene important for overall health?

(ii) What are the primary components of a basic skincare routine?

(iii) What are the key elements of dining etiquette in formal settings?

(iv) Explain the concept of non-verbal communication and give one example.

(v) What are some examples of ethical practices when using digital content?

(vi) Why should you be cautious about engaging in online conflicts?

SUBJECTIVE (PART-III)

Attempt any two questions in detail from the following: **(2 × 7 = 14)**

Q-4. Discuss the various components of non-verbal communication and explain how they interact to create meaning.

Q-5. Write an email to your friend regarding examination.

Q-6. Explain the importance of maintaining a responsible and ethical digital presence.

Punjab Education, Curriculum, Training & Assessment Authority

> **Pairing Scheme / Instructions for Preparation of Exam Paper of Physics-Tech for Class-9**

The paper of Physics-Tech for Grade-9 will consist of 40 marks. Duration of the paper will be 2 hours.

(Objective Type = 15 minutes + Subjective Type = 1:45 hours)

Objective Type = 10 marks + Subjective Type = 30 marks.

The paper will be made as per following details:

Part-I: Objective:	**Q-1:** 10 Multiple Choice Questions (MCQs) will be developed from the entire content of the textbook. Two MCQs will be asked from chapters 4 and 6 each, and one MCQ will be asked from chapters 1, 2, 3, 5, 7 and 8 each.	**(1 × 10) = 10**
Part-II: Subjective:	This section will contain two short answer questions. Each short answer question will be asked from the exercises of the textbook. The detail is as follows: **Q-2:** Four (4) short answer questions have to be answered out of 6. The detail is as follows: • Two (02) short answer questions should be asked from chapters 3 and 4 each and one short answer question will be asked from chapters 1 and 2 each.	**(2 × 4) = 8**
	Q-3: Four (4) short answer questions have to be answered out of 6. The detail is as follows: • Two (2) short answer questions should be asked from chapters 5 and 6 each and one short answer question will be asked chapters 7 and 8 each.	**(2 × 4) = 8**
Part-III: Subjective:	This section will contain three detailed questions and students have to attempt two questions carrying 7 marks each. Each detailed question will be asked form the exercises of the textbook. The detail is as follows: **Q-4:** One detailed question will be asked from chapters 1, 2 and 3 each. **Q-5:** One detailed question will be asked from chapters 4 and 5 each. **Q-6:** One detailed question will be asked from chapters 6, 7 and 8 each.	**(2 × 7) = 14**
Note:	In part-III, each question will consist of two parts. Part (a) may be asked form any chapter. Part (b) will be asked from different chapters (not from the same chapter as Part (a). Part (a) will carry 3 marks while Part (b) will carry 4 marks.	

MODEL PAPER OF PHYSICS-TECH FOR GRADE-9
Objective (Part-I)

وقت:15 منٹ

Time allowed: 15 Mins.

کل نمبر:10

Max. Marks: 10

نوٹ: ہر سوال کے چار ممکنہ جوابات A،B،C اور D دیے گئے ہیں۔ جو انتخاب آپ کے خیال میں درست ہے، اس سوال کے سامنے والے دائرے کو مارکر یا پین کی سیاہی سے بھریں۔ دو یا دو سے زیادہ دائروں کو کاٹنے یا بھرنے کی صورت میں جواب غلط تصوّر ہو گا۔

Note: Four possible answers A, B, C and D to each question are given. The choice which you think is correct, fill that circle in front of that question with marker or pen ink in the answer-book. Cutting or filling two or more circles will result in zero mark in that question.

(i) درج ذیل میں سے کون سی مقدار غیر طبیعی مقدار ہے؟

(i) Which one is a non-physical quantity?

(a) Distance فاصلہ (b) Density ڈینسٹی

(c) Colour رنگ (d) Temperature ٹمپریچر

(ii) ایک گیند کسی ٹاور پر سے گرایا گیا ہے۔ پہلے ایک سیکنڈ میں اس کا طے کردہ فاصلہ ہو گا:

(ii) A ball is dropped from the top of a tower, the distance covered by it in the first second is:

(a) 5 m (b) 10 m
(c) 50 m (d) 100 m

(iii) جب ہم ایک پتھر کو پاؤں سے ٹھوکر مارتے ہیں تو ہمیں چوٹ لگتی ہے۔ اس کی وجہ ہے:

(iii) When we kick a stone, we get hurt. This is due to:

(a) Inertia انرشیا (b) Velocity ولاسٹی

(c) Momentum موہمینٹم (d) Reaction ردِّعمل

(iv) ایک ذرّے پر بیک وقت 3 اور 4 نیوٹن کی دو فورسز لگ رہی ہیں۔ ذرّے پر حاصل فورس ہو گی:

(iv) A particle is simultaneously acted upon by two forces of 4 and 3 newtons. The net force on the particle is:

(a) 1 N (b) between 1 N and 7 N
(c) 5 N (d) 7 N

(v) ایک سلنڈر اپنے گول پیندے کے بل پڑا ہوا ہے۔ یہ:

(v) A cylinder resting on its circular base is in:

(a) Stable equilibrium قیام پذیر توازن

(b) Unstable equilibrium غیر قیام پذیر توازن

(c) Neutral equilibrium نیوٹرل توازن

(d) None of these ان میں سے کوئی بھی نہیں

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(vi) If the magnitude of momentum of an object is doubled; the kinetic energy of the object will:

(a) double دو گنی (b) increase to four times چار گنا ہو جائے گی

(c) reduce to one-half آدھی رہ جائے گی (d) remain the same اتنی ہی رہ جائے گی

(vii) Two metal plates of area 2 and 3 square metre are placed in a liquid at the same depth. The ratio of pressures on the two plates is:

(a) 1:1 (b) $\sqrt{2} : \sqrt{3}$

(c) 2:3 (d) 4:9

(viii) What is the force exerted by the atmosphere on a rectangular-shaped surface of length 50 cm and breadth 40 cm? The atmospheric pressure is 100 kPa.

(a) 20 kN (b) 100 kN

(c) 200 kN (d) 500 kN

(ix) The temperature which has the same value on Celsius and Fahrenheit scale is:

(a) -40 (b) +40

(c) +45 (d) -45

(x) A common method used to magnetise a material is:

(a) stroking رگڑنا

(b) hitting ضرب لگانا

(c) heating گرم کرنا

(d) placing inside a solenoid having AC ایسی سولی نائڈ کے اندر رکھنا جس میں سے اے سی کرنٹ گزر رہا ہو

Subjective Type
(Part-II)

وقت:1:45 گھنٹے

کل نمبر:30

Time allowed: 1:45 Hours   **Max. Marks: 30**

2.   کوئی سے چار(04)سوالات کے مختصر جوابات لکھیے۔

Q-2. Write short answers to any four (04) questions.   (2x4=8)

کسی مقدار کی پیمائش کے لیے ایک یونٹ مقرر کرنا کیوں ضروری ہے؟   (i)

(i)   Why do we need a standard unit for measurement?

سکیلر اور ویکٹر مقداروں کی پانچ پانچ مثالیں دیں۔   (ii)

(ii)   Give 5 examples each for scalar and vector quantities?

کسی شے کی ٹرمینل ولاسٹی کی تعریف کریں۔   (iii)

(iii) Define terminal velocity of an object.

تصوّر کریں کہ جب ہر شے میں فرکشن ختم ہو جائے تو روز مرّہ زندگی کا منظر کیا ہو سکتا ہے؟   (iv)

(iv)   Imagine that if friction vanishes suddenly from everything, then what could be the scenario of daily life activities?

کسی فورس کے عمل کرنے والی لائن کیا ہوتی ہے؟   (v)

(v)   What is the line of action of a force?

ایک کار دو مختلف ریڈیَس کے موڑوں سے ایک جتنی سپیڈ سے گزرتی ہے۔ کس نصف قطر والے موڑ میں اس پر زیادہ سینٹری پیٹل فورس لگتی ہے؟ اپنے جواب کو ثابت کریں۔   (vi)

(vi)   A car travels at the same speed around two curves with different radii. For which radius the car experiences more centripetal force? Prove your answer.

3.   کوئی سے چار(04)سوالات کے مختصر جوابات لکھیے۔

Q-3. Write short answers to any four (04) questions.   (2x4=8)

دوڑتی ہوئی خاتون سیڑھی پر چڑھتی ہے۔ اس دوران وہ J 4500 گریوی ٹیشنل انرجی حاصل کر لیتی ہے۔ اگر وہ اس سیڑھی پر پہلے سے دو گنا سپیڈ سے دوڑتی ہوئی چڑھتی تو وہ کتنی پوٹینشل انرجی حاصل کرے گی؟   (i)

(i)   A woman runs up a flight of stairs. The gain in her gravitational potential energy is 4500 J. If she runs up the same stairs with twice the speed, what will be her gain in potential energy.

کیا کسی جسم کی کائی نیٹک انرجی منفی ہو سکتی ہے؟   (ii)

(ii)   Can the kinetic energy of a body ever be negative?

مائع کے پریشر اور مائع کی گہرائی کے درمیان کیا تعلق ہے؟   (iii)

(iii) What is the relationship between liquid pressure and the depth of the liquid?

سپرنگ لوہے کی بجائے سٹیل سے بنائے جاتے ہیں۔ کیوں؟   (iv)

(iv)   Springs are made of steel instead of iron. Why?

کیا وجوہات ہیں کہ گیسیں نہ تو کوئی خاص والیوم رکھتی ہیں اور نہ خاص شکل؟   (v)

(v)   What is the reasons that gases have neither a fixed volume nor a fixed shape?

میگنیٹک لائنز آف فورس کیا ہوتی ہیں؟   (vi)

(vi)   What are magnetic lines of force?

<center># (Part-III)</center>

نوٹ: کوئی سے دو(02)سوالات کے جوابات لکھیے۔

Note: Attempt any two (02) questions.

4. (الف)   SI میں ماخوذ یونٹس کی مثالیں دیں۔ان کو بنیادی یونٹس سے کیسے اخذ کیا جاتا ہے؟وضاحت کریں۔   (3)

Q-4. (a)   Give three examples of derived units in SI. How are they derived from base units? Describe briefly.

(ب)   لوہے کا ایک گولا کسی ٹاور سے گرایا گیا ہے۔یہ زمین پر 4 سیکنڈ میں پہنچتا ہے۔   **(4)**

(i) ٹاور کی بلندی معلوم کریں۔   (ii) گولے کی زمین سے ٹکراتے ہوئے ولاسٹی معلوم کیجیے۔

(b)   An iron bob is dropped from the top of a tower. It reaches the ground in 4 seconds. Find: (i) the height of the tower. (ii) the velocity of the ball as it strikes the ground.

5. (الف)   توازن کی دو شرائط بیان کریں اور ان کی وضاحت کریں۔   (3)

Q-5. (a)   State and explain two conditions of equilibrium.

(ب)   10 کلوگرام کا ایک باکس ایک ریمپ یا سلوپ پر 80 نیوٹن کی فورس لگا کر 15 میٹر تک دھکیلا جاتا ہے۔اگر باکس اس دوران 5 میٹر کی   (4)

بلندی حاصل کرے تو اس سسٹم کی ایفی شینسی کیا ہوگی؟

(b)   A box of mass 10 kg is pushed up along a ramp 15 m long with a force of 80 N. If the box rises up a height of 5 m, what is the efficiency of the system?

6. (الف)   ٹمپریچر کیا ہے؟یہ کیسے ماپا جاتا ہے؟مختصر طور پر شیشے میں مرکری تھرمامیٹر کو بیان کریں۔   (3)

Q-6. (a)   What is temperature? How is it measured? Describe briefly a mercury in glass thermometer.

(ب)   ایک ہائیڈرالک پریس کے چھوٹے اور بڑے پسٹنوں کے عرضی رقبے بالترتیب 10 cm^2اور100 cm^2 ہیں۔ چھوٹے پسٹن پر کتنی   (4)

فورس لگائی جائے کہ 4000 N وزنی کار کو اُٹھایا جا سکے؟

(b)   The area of cross-section of the small and large pistons of a hydraulic press is 10 cm^2 and 100 cm^2 respectively. What force should be exerted on the small piston in order to lift a car of weight 4000 N.

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> **Pairing Scheme / Instructions for Preparation of Exam Paper of Chemistry-Tech for Grade-9**

The paper of Chemistry-Tech for Grade-9 will consist of 40 marks.

Duration of the paper will be 2 hours.

(Objective Type = 15 minutes + Subjective Type = 1:45 hours)

Objective Type = 10 marks + Subjective Type = 30 marks.

The paper will be made as per following details:

Part-I: Objective:	**Q-1:** 10 Multiple Choice Questions, one each from Chapter 1 to 10.	**1 × 10 = 10**
Part-II: Subjective:	**Q-2:** 4 short answer questions have to be answered out of 6. The detail is as follows:	**2 × 4 = 8**

Q-2:

Chapter	1	2	3	4	5	6
No. of Short Questions per Chapter	1	1	1	1	1	1

Q-3: 4 short answer questions have to be answered out of 6. The detail is as follows: **2 × 4 = 8**

Chapter	7	8	9	10	11
No. of Short Questions per Chapter	1	1	1	2	1

Part-III: Subjective:

This section will contain three questions bifurcated in two-part **a & b** (carrying 4 & 3 marks respectively) and students have to attempt 2 questions The detail is as follows: **2 × 7 = 14**

Q-6:

Chapter	1	2
Part	a	b

Q-7:

Chapter	3	7
Part	a	b

Q-8:

Chapter	9	11
Part	a	b

MODEL PAPER OF MATRIC TECH CHEMISTRY-TECH FOR GRADE-9
Objective (Part-I)

Time Allowed: 15 Min.   **Max. Marks: 10**

نوٹ: ہر سوال کے چار ممکنہ جوابات C،B،A اور D دیے گئے ہیں۔ جو انتخاب آپ کے خیال میں درست ہے، اس سوال کے سامنے والے دائرے کو مارکر یا پین کی سیاہی سے بھریں۔ دو یا دو سے زیادہ دائروں کو کاٹنے یا بھرنے کی صورت میں جواب غلط تصوّر ہو گا۔

Note: Four possible answers A, B, C and D to each question are given. The choice which you think is correct, fill that circle with marker or pen ink in the answer-book. Cutting or filling two or more circles will result in zero mark in that question.

(i)   کون سا پولیمر انسان کا بنایا ہوا ہے؟

(i)   The man-made polymer is:

     (a) Starch   سٹارچ   (b) Polystyrene   پولی سٹائرین

     (c) Protein   پروٹین   (d) Cellulose   سیلولوز

(ii)   ایلیمنٹس کے تیسرے شیل میں زیادہ سے زیادہ کتنے الیکٹرونز موجود ہو سکتے ہیں؟

(ii)   How many electrons can be accommodated at the most in the third shell of the elements?

     (a) 8   (b) 18

     (c) 10   (d) 32

(iii)   کس آئیونک کمپاؤنڈ کا میلٹنگ پوائنٹ سب سے زیادہ ہو گا؟

(iii)   Which ionic compound has the highest melting point?

     (a) NaCl   (b) KCl

     (c) LiCl   (d) RbCl

(iv)   ایلومینیم آکسائیڈ (Al_2O_3) کے 204 گرام میں Al کا ماس کتنا ہو گا؟

(iv)   What is the mass of Al in 204 g of aluminium oxide, Al_2O_3?

     (a) 26 g   (b) 27 g

     (c) 54 g   (d) 108 g

(v)   کون سا ہائیڈروجن ہیلائڈ اینڈوتھرمک ری ایکشن کے نتیجے میں بنتا ہے؟

(v)   Formation of which hydrogen halide from the elements is an endothermic reaction?

     (a) HCl   (b) HF

     (c) HBr   (d) HI

(vi) ہوا میں موجود کونسی گیسیں بجلی چمکنے سے ری ایکشن کرتی ہیں؟

(vi) Predict which components of the atmosphere react in the presence of lightening?

(a) N_2 and H_2O (b) O_2 and H_2O

(c) CO_2 and O_2 (d) N_2 and O_2

(vii) کیلشیم ہائیڈروآکسائیڈ کو پانی میں حل کریں تو کتنے ہائیڈروآکسائیڈ آئنز بناتا ہے؟

(vii) How many hydroxide ions, calcium hydroxide will release in water?

(a) 1   (b) 2

(c) 3   (d) 0

(viii) نائٹروجن کا ایٹم اپنے بیرونی شیل میں کتنے الیکٹرونز حاصل کر سکتا ہے؟

How many electrons can nitrogen accept in its outermost shell?

(a) 2   (b) 3

(c) 4   (d) 5

(ix) کون سا ہیلوجن ایسڈ عام درجہ حرارت پر ان سٹیبل ہے؟

(ix) Which halogen acid is unstable at room temperature?

(a) HCl   (b) HF

(c) HBr   (d) HI

(x) کون سی گیسیں گرین ہاؤس ایفیکٹ کا موجب بنتی ہیں؟

(x) Which gases are responsible for greenhouse effect?

(a) SO_2, NO_2 (b) NO_2, CO

(c) CO_2, CH_4 (d) O_2, N_2

Subjective Type (Part-II)

Time allowed: 1.45 Hrs.   **Max. Marks: 30**

Q. 2: Write short answers to any four (04) questions:

کوئی سے چار (4) سوالات کے مختصر جوابات لکھیے: (8 = 4 × 2)

گریفائٹ کیوں اہم ہے؟   (i)

(i) What is the importance of graphite?

ایک ایٹم کس طرح انرجی جذب اور خارج کرتا ہے؟   (ii)

(ii) How can an atom absorb and evolve energy?

HF ایک مائع ہے اور HCl ایک گیس، ایسا کیوں ہے؟   (iii)

(iii) Why HF is a liquid while HCl is a gas?

1.5 گرام پانی میں کتنے مالیکیولز ہوں گے؟   (iv)

(iv) How many molecules are present in 1.5 g H_2O?

بانڈ کا ٹوٹنا ایک اینڈوتھرمک عمل کیوں ہے؟   (v)

(v) Why is breaking of a bond an endothermic process?

ایتھائل ایسیٹیٹ کو کمرشل پیمانے پر کیسے تیار کرتے ہیں؟   (vi)

(vi) How ethyl acetate is prepared commercially?

Q. 3: Write short answers to any four (04) questions:

کوئی سے چار (4) سوالات کے مختصر جوابات لکھیے: (8 = 4 × 2)

کیلشیم میٹل کس طرح سے سلفیورک ایسڈ سے ری ایکٹ کرتی ہے؟   (i)

(i) How does calcium metal react with dilute H_2SO_4?

لفظ پیریاڈک کی کیا اہمیت ہے؟   (ii)

(ii) What is the significance of the word periodic?

آئیوڈین عام درجہ حرارت پر ٹھوس حالت میں کیوں پائی جاتی ہے؟   (iii)

(iii) Why does iodine exist in the solid state at room temperature?

ایسڈ رین جنگلات پر کیسے اثر انداز ہوتی ہے؟   (iv)

(iv) How does acid rain affect forest?

آرگینک اور ان آرگینک کمپاؤنڈز کا موازنہ کریں۔   (v)

(v) Differentiate between an organic and inorganic compound.

ماحولیاتی تعلیم کا سب سے اہم مقصد کیا ہے؟   (vi)

(vi) What is the main objective of environmental education?

Subjective (Part-III)

Note: Attempt any two questions.

Q. 4: (a) Define solubility of a solute. How does the solubility of solute change with the increase in temperature? **(4)**

(الف) کسی سولیوٹ کی سولوبیلیٹی کی تعریف کریں۔ درجہ حرارت بڑھانے سے مختلف اشیاء کی سولوبیلیٹی پر کیا فرق پڑتا ہے؟

(b) Describe how electron was discovered. **(3)**

(ب) الیکٹران کیسے دریافت ہوا تفصیل سے لکھیں۔

Q. 5: (a) Compare the properties of ionic and covalent compounds (any four). **(4)**

(الف) آیونک اور کووبلینٹ کمپاؤنڈز کی خصوصیات کا تقابلی جائزہ لیں (کوئی چار)۔

(b) Differentiate between an acid and its conjugate base. **(3)**

(ب) ایسڈز اور اس کے کانجوگیٹ بیس میں کیا فرق ہے؟

Q. 6: (a) Compare the properties of metals and non- metals (any four). **(4)**

(الف) میٹلز اور نان میٹلز کی خصوصیات کا موازنہ کریں (کوئی چار)۔

(b) Describe the importance of organic compounds in daily life. **(3)**

(ب) روز مرہ زندگی میں آرگینک کمپاؤنڈز کی اہمیت کی وضاحت کریں۔

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Pairing Scheme / Instructions for Preparation of Exam Paper of Biology-Tech for Grade-9

The paper of Biology-Tech for Grade-9 will consist of 40 marks. Duration of the paper will be 2 hours.
(Objective Type = 15 minutes + Subjective Type = 1:45 hours)
Objective Type = 10 marks + Subjective Type = 30 marks.
The paper will be made as per following details:

Objective (Part-I)

Q.1: MULTIPLE CHOICE QUESTIONS	10 Marks (1 mark each)
Chapter # 1	1 MCQ
Chapter # 2	1 MCQ
Chapter # 3	1 MCQ
Chapter # 4	1 MCQ
Chapter # 5	1 MCQ
Chapter # 6	1 MCQ
Chapter # 7	1 MCQ
Chapter # 8	2 MCQs
Chapter # 9	1 MCQs

Part-II: Subjective:	**Q-2:** 4 short answer questions have to be answered out of 6. The detail is as follows:	**2 × 4 = 8**

Chapter	1	2	3	4
No. of Short Questions per Chapter	1	2	2	1

	Q-3: 4 short answer questions have to be answered out of 6. The detail is as follows:	**2 × 4 = 8**

Chapter	5	6	7	8	9
No. of Short Questions per Chapter	1	1	1	2	1

Part-III: Subjective:	This section will contain three questions bifurcated in two-part **a & b** (carrying 4 & 3 marks respectively) and students have to attempt two questions The detail is as follows:	**2 × 7 = 14**

Q-4:

Chapter	1	3
Part	a	b

Q-5:

Chapter	6	7
Part	a	b

Q-6:

Chapter	8	9
Part	a	b

MODEL PAPER OF BIOLOGY-TECH FOR GRADE-9
Objective (Part-I)

Time Allowed: 15 Mins. **Max. Marks: 10**

(i) سیلز کا ایسا گروہ جو ایک جیسا فعل ادا کرے کہلاتا ہے:

(i) The groups of cells that have similar functions are called:

(a) Tissues ٹشوز (b) Organs آرگنز

(c) Systems سسٹمز (d) Molecules مالیکیولز

(ii) ایک یونی سیلولر فنجائی کی مثال ہے:

(ii) The example of an unicellular fungi is:

(a) Mold مولڈ (b) Rust رسٹ

(c) Mushroom مشروم (d) Yeast ییسٹ

(iii) سائٹوپلازم میں پروٹین بننے کی جگہ کہلاتی ہے:

(iii) In cytoplasm the sites for protein synthesis are called:

(a) Stroma سٹروما (b) Ribosome رائبوسوم

(c) Chromosome کروموسوم (d) Cristae کرسٹی

(iv) سیل سائیکل کی کونسی فیز میں ہر کروموسوم کا DNA ڈبل ہو جاتا ہے:

(iv) In which phase of cell cycle, DNA of each chromosome is replicated:

(a) G1 Phase G1 فیز (b) S Phase S فیز

(c) G2 Phase G2 فیز (d) M Phase M فیز

(v) معدے کی دیوار میں موجود اپی تھیلیل ٹشو کس کی پیداوار کا ذمہ دار ہوتا ہے:

(v) The epithelial tissue in stomach as well is responsible for producing:

(a) Mucus میوکس (b) Pepsinogen پیپسینوجن

(c) HCl ایچ سی ایل (d) All of these یہ تمام

(vi) The enzyme used in dish washing is called:

(a) Trypsin   ٹرپسن   (b) Protease   پروٹی ایز

(c) Amylase   ایمائلیز   (d) Lipase   لائی پیز

(vii) Light reaction of photosynthesis occur in:

(a) Plasma membrane   پلازما ممبرین

(b) Cytoplasm of cell   سیل کے سائٹوپلازم

(c) Thylakoids of Chloroplast   کلوروپلاسٹ کے تھیلا کائیڈس میں

(d) Stroma of Chloroplast   کلوروپلاسٹ کے سٹروما میں

(viii) The loss of water in the form of vapours from plant surface is called:

(a) Transpiration   ٹرانسپائریشن   (b) Respiration   ریسپائریشن

(c) Osmosis   آسموسس   (d) Active Transport   ایکٹو ٹرانسپورٹ

(xi) Succulent organs are present in:

(a) Xerophytes   زیروفائٹس   (b) Hydrophytes   ہائیڈروفائٹس

(c) Mesophytes   میزوفائٹس   (d) Halophytes   ہیلوفائٹس

(x) An example of Tuber is:

(a) Potato   آلو   (b) Ginger   ادرک

(c) Onion   پیاز   (d) Garlic   لہسن

Subjective Type (Part-II)

Time allowed: 1.45 Hrs.   **Max. Marks: 30**

Q. 2: Write short answers to any four (04) questions:

<div dir="rtl">

(2 × 4 = 8)   کوئی سے چار (4) سوالات کے مختصر جوابات لکھیے:

(i)   سمندری حیاتیات کے مطالعہ کے دو فوائد بیان کریں۔

</div>

(i)   What are the benefits of studying marine biology?

<div dir="rtl">

(ii)   کسی علاقے کی حیاتیاتی تنوع کو کس طرح ناپا جاتا ہے؟

</div>

(ii)   How biodiversity of an area is measured?

<div dir="rtl">

(iii)   حیاتیاتی تنوع کے دو اہداف لکھیں۔

</div>

(iii)   Write two aims of biodiversity

<div dir="rtl">

(iv)   ایسیلولر کی تعریف کیجیے۔

</div>

(iv)   Define the terms acellular

<div dir="rtl">

(v)   پروکیریوٹک اور یوکیریوٹک خلیوں میں فرق بیان کریں۔

</div>

(v)   Differentiate between Prokaryotic and Eukaryotic cells

<div dir="rtl">

(vi)   میوسس میں کراسنگ اوور جینیاتی تنوع میں کس طرح حصہ ڈالتی ہے؟

</div>

(vi)   How does crossing over contribute to genetic variation in meiosis?

Q. 3: Write short answers to any four (04) questions:

<div dir="rtl">

(2 × 4 = 8)   کوئی سے چار (4) سوالات کے مختصر جوابات لکھیے:

(i)   سب سے چھوٹے اور سب سے بڑے سطح تنظیم کا نام لکھیں۔

</div>

(i)   Name the smallest and largest level of organization.

<div dir="rtl">

(ii)   اینزائم کی ایکٹو سائٹ کا کردار لکھیے۔

</div>

(ii)   Write the role of active site of enzyme

<div dir="rtl">

(iii)   این ایر ابک ریسپائریشن کی تعریف کریں۔

</div>

(iii)   Define an anaerobic respiration

<div dir="rtl">

(iv)   زائلیم اور فلویئم ٹشوز کا حل لکھیے۔

</div>

(iv)   Write the function of xylem and phloem tissues.

<div dir="rtl">

(v)   پھول میں ریسیپٹکل کے بارے میں آپ کیا جانتے ہیں۔

</div>

(v)   What do you know about receptacle in a flower?

<div dir="rtl">

(vi)   پولی نیشن کی تعریف کریں۔

</div>

(vi)   Define pollination.

Subjective Type (Part-III)

Note: Attempt any two questions. **(2 × 7 = 14)**

Q. 4: (a) What is a hypothesis? Write for characteristics of good hypothesis. **(4)**

(الف) ہائی پوتھیسس کیا ہے؟ ایک اچھے ہائی پوتھیسس کی چار خوبیاں لکھیے۔

(b) Describe the three layers of plant cell wall. **(3)**

(ب) پلانٹ سیل وال کی تین تہیں بیان کریں۔

Q. 5: (a) Write down any three characteristics of enzymes. **(4)**

(الف) اینزائمز کی کوئی سی تین خصوصیات لکھیے۔

(b) Describe the key events of light reactions of photosynthesis. **(3)**

(ب) فوٹو سینتھی سسز کے لائٹ ری ایکشن کے کوئی سے تین اہم مراحل بیان کریں۔

Q. 6: (a) Describe the Pressure flow mechanism in plants. **(4)**

(الف) پودوں میں پریشر فلو میکانزم بیان کریں۔

(b) Describe advantages and disadvantages of vegetative propagation in plants. **(3)**

(ب) پودوں میں ویجی ٹیٹو پراپیگیشن کے فوائد اور نقصانات بیان کریں۔

Punjab Education, Curriculum, Training & Assessment Authority

> **Pairing Scheme / Instructions for Preparation of Exam Paper
> of Computer Science & Entrepreneurship-Tech for Class-9**

The paper of Computer Science & Entrepreneurship-Tech for Grade-9 will consist of 40 marks.

Duration of the paper will be 2 hours.

(Objective Type = 15 minutes + Subjective Type = 1:45 hours)

Objective Type = 10 marks + Subjective Type = 30 marks.

The paper will be made as per following details:

Part-I: Objective:	**Q-1:** 10 Multiple Choice Questions (MCQs) will be developed from the entire content of the textbook. One MCQ will be asked from all chapters from chapter No. 1 to 10.	**1×10= 10**
Part-II: Subjective:	This section will contain three short answer questions. Each short answer question will be asked from the exercises of the textbook. The detail is as follows:	**2 × 4 = 8**
	Q-2: 4 short answer questions have to be answered out of 6. The detail is as follows: • One short answer question will be asked each from chapter No.1, 2, 4 and 6. • Two short answer questions should be asked from chapter No. 3.	
	Q-3: 4 short answer questions have to be answered out of 6. The detail is as follows: • Two short answer questions will be asked from chapter No. 5. • One short answer question will be asked each from chapter No. 7, 8, 9 and 10.	**2 × 4 = 8**
Part-III: Subjective:	This section will contain three detailed questions and students have to attempt two questions carrying 7 marks each. Each detailed question will be asked form the exercises of the textbook. The detail is as follows: **Q-5:** One detailed question will be asked from Chapter No 5. **Q-6:** One detailed question will be asked from Chapter No 7. **Q-7:** One detailed question will be asked either from chapter 2 or chapter 10.	**2 × 7=14**

MODEL PAPER OF COMPUTER SCIENCE AND ENTREPRENEURSHIP-TECH FOR GRADE-9

Objective (Part-I)

Question # 1   **Time Allowed: 15 mins**

Multiple Choice Questions (MCQ)

Choose the correct option   **(1x10 = 10)**

i.   **Which of the following transport's data inside a computer among different Component?**

   a)   Control Unit   b)   System Bus

   c)   Memory   d)   Processor

ii. **In the single precision, how many bits are used for the exponent?**

   a) 23 bits   b)   8 bits   c)   11 bits   d)   52 bits

iii. **Which logic gate output true only if both inputs are true??**

   a) OR gate   b)   AND gate   c)   XOR gate   d)   NOT gate

iv. **Which of the following is an example of application software?**

   a)   Microsoft word   b)   BIOS

   c)   Disk cleanup   d)   Device Manager

v.   **Which network topology connects all devices to central hub?**

   a) Ring   b)   Mesh   c)   Bus   d)   Star

vi. **Which term refers to the process of ignoring the detail to focus on the main idea?**

   a)   Decomposition   b)   Pattern Recognition

   c)   Abstraction   d)   Algorithm Design

vii. **What type of data is used to Categorize items without implying any order?**

   a)   Ordinal Data   b)   Discrete Data

   c)   Nominal Data   d)   Continuous Data.

viii. **Which of these is a security concern in IOT deployment?**

   a)   Device Vulnerability   b)   Data privacy

   c)   Lack of Standardization   d)   All

ix. **What should you do if you email from an unknown render an email asking for personal information?**

   a)   Provide the information requested

   b)   Forward the email to your friends

   c)   Ignore or delete the email

   d)   Open the email and click on any links

x.   **What is the Frist step in the design thinking process?**

   a) Prototyping   b)   Testing   c)   Empathizing   d) Defining

Subjective (Part-II)

Total Marks: 30   **Time Allowed: 1:45 hrs**

Q # 2   **Write Short answers to any four (4) questions.**   **(2x4=8)**

   i. Define Natural Science.

   ii. Convert 1010011010 to Octal number system.

   iii. What do you know about Analog signal?

   iv. Simplify the expression $(A+B).(\overline{A+B})$.

   v. What do you know about application Software?

   vi. What is algorithm?

Q # 3   **Write Short answers to any four (4) questions.**   **(2x4=8)**

   i. What are the basic components of data communication?

   ii. Define router.

   iii. Define qualitative data.

   iv. Define Role-based systems with example.

   v. Define Cloud Services.

   vi. Define role of digital Technologies.

Subjective (Part-III)

(2x7=14)

Q # 4 What is network topology, explain bus and star topology?

Q # 5 What is data collection, Explain different method of data Collection?

Q # 6 What is E-commerce, also explain E-commerce platforms?