

0318-61626

Name: \_\_\_\_\_

Seat No. \_\_\_\_\_

**Question Paper - I**

**General Instructions**

- To ensure a fair chance for every candidate and conduct the test efficiently, we request your cooperation by carefully following the instructor's instructions.
- Pay your undivided attention to the instructor when instructions are being given.
- In the interest of fairness, we insist that no one may continue working for a single second after the instructor has asked them to stop.
- The instructor will tell you when to start work and when to stop. You may go through the whole Question Paper once the test begins.
- You will only write your name and seat number on the Question Paper.
- During the test, do not talk, whisper, or turn your eyes or head away from your Question Paper and OMR Answer Sheet.
- You must put your signature on the OMR Answer Sheet, which will be provided separately, to solve all Multiple-Choice Questions (MCQs).
- Each MCQ has four options: a, b, c, and d. Choose only ONE option. On the OMR Answer Sheet, fill the circle for your chosen answer in the correct way, as shown below.

Correct Way				Incorrect Way					
1.	<input type="radio"/> a	<input type="radio"/> b	<input checked="" type="radio"/>	<input type="radio"/> d	1.	<input type="radio"/> a	<input type="radio"/> b	<input checked="" type="radio"/>	<input type="radio"/> d
					2.	<input type="radio"/> a	<input checked="" type="radio"/>	<input type="radio"/> c	<input type="radio"/> d
					3.	<input type="radio"/> a	<input type="radio"/> b	<input checked="" type="radio"/>	<input type="radio"/> d
					4.	<input type="radio"/> a	<input type="radio"/> b	<input checked="" type="radio"/>	<input type="radio"/> d
					5.	<input type="radio"/> a	<input checked="" type="radio"/>	<input type="radio"/> c	<input checked="" type="radio"/>
					6.	<input checked="" type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/> c	<input type="radio"/> d
					7.	<input type="radio"/> a	<input type="radio"/> b	<input type="radio"/> c	<input type="radio"/> d

- On the OMR Answer Sheet, only properly filled circles (as shown in the picture above) will be considered valid. Any other markings or unfilled circles will be treated as incorrect and will result in failure or disqualification.
- Do not use a pencil or any other pen to shade the circle on the OMR Answer Sheet; use only the ballpoint pen provided by the STS.
- The Question Paper includes one hundred (100) MCQs. The MCQs distribution is as follows:  
a. English: 10% - General Knowledge: 10% - Teaching & Learning Pedagogies: 20%  
Biology: 12% - Chemistry: 12% - Physics: 12% - Mathematics: 12% - Computer: 12%
- The total test time is 100 minutes.
- The total marks of the test are 100.
- There is no negative marking in the test.
- Any evidence of cheating or non-compliance with instructions will disqualify you from the test, and your name will be removed from the list of candidates.
- The examination hall strictly prohibits mobile phones, calculators, or other electronic devices.
- After you have completed your test, submit your **original OMR Answer Sheet** and the **Question Paper** to the invigilator. If you do not submit, you will be considered as fail, and your name will be removed from the list of candidates.
- The last page of the Question Paper is for the rough work. Please **do not** separate it.

**Reading Comprehension (1-4)**

Read the passage and answer the questions at the end.

Dr Martin Luther King Jr.'s 'I Have a Dream' is one of the most powerful speeches in history, delivered during the March on Washington in 1963. In it, King passionately speaks against racial segregation, discrimination, and inequality faced by African Americans in the United States. He reminds the audience that, despite the promises of the American Constitution and the Declaration of Independence, Black citizens are still denied freedom and justice.

King's central vision is a dream of equality, where people are judged not by the colour of their skin but by the content of their character. He imagines a future where children of all races can join hands and live in harmony. With references to American ideals, the Bible, and the natural right to freedom, he emphasizes that justice must no longer be delayed. His speech calls for peaceful struggle, non-violence, and perseverance until freedom rings across the nation.

Ultimately, 'I Have a Dream' is both a demand and a hope: a demand for civil rights and an inspiring hope for a society based on justice, brotherhood, and equality. King's words continue to inspire movements for human rights across the world.

1. The theme of the first paragraph is about:

- |  |  |
|--|--|
| a. Segregation of African and Americans  | e. Deprivation of basic rights of Africans |
| b. Discrimination inflicted by Americans | d. African and Americans harmony           |

2. The theme of the second paragraph is about:

- |                                |                                     |
|--------------------------------|-------------------------------------|
| a. Character, justice and hope | e. Vision, judgement and slavery    |
| b. Freedom, equality and peace | d. Equality, hostility and struggle |

3. Had there been a violence call by Martin, then there would have been:

- |                                       |                            |
|---------------------------------------|----------------------------|
| a. Chaos and less support from people | e. Dominancy over people   |
| b. Rise in credibility                | d. Harmony in both nations |

4. The last sentence is about:

- |                           |                                   |
|---------------------------|-----------------------------------|
| a. Human rights globally  | e. Human rights of Black citizens |
| b. Human rights in the US | d. Human rights locally           |

Select the most appropriate meaning of the underlined word from the given choices.

5. The girl who used to be very vociferous does not talk much anymore.

- |             |         |           |         |
|-------------|---------|-----------|---------|
| a. Vehement | b. Deep | c. Silent | d. High |
|-------------|---------|-----------|---------|

6. Identify the adjective from the given sentence:

What book are you reading in the library?

- |    |    |    |    |
|----|----|----|----|
| a. | b. | c. | d. |
|----|----|----|----|

7. Identify the sentence with correct punctuation:

- He said to me "he listens music every night."
- He said to me, he listens music every night.
- He said to me, "he listens music every night."
- He said to me, "he listens music every night"

8. You have been working with him since noon. Change into the Future Perfect Continuous Tense:

- You will be working with him since noon
- You have been working with him since noon
- You will have been working with him since noon
- You will has been working with him since noon

9. He was driving a car with his family from the village to the city during the rain. Change the Voice:

- A car was being driven by him with his family from the village to the city during the rain
- A car was driving by him with his family from the village to the city during the rain
- A car was driven by me with his family from the village to the city during the rain
- A car is driven by him with his family from the village to the city during the rain

Kashif said to me, "Will you come with us tomorrow?" **Change the Narration:**

- a. Kashif told I would go with them the following day
- b. Kashif told I would go with the following day
- c. Kashif inquired of I would go with them the following day
- d. Kashif asked me if I would go with them the following day

### PART - II (GENERAL KNOWLEDGE)

11 - 20

11. The percentage of the Earth's surface covered with water is:  
a. 29%                      b. 50%                      c. 71%                      d. 85%
12. The following is a major Kharif crop in Pakistan, sown at the beginning of the monsoon season:  
a. Wheat                      b. Gram                      c. Mustard                      d. Rice
13. The Indus Waters Treaty was signed in the year:  
a. 1958                      b. 1960                      c. 1962                      d. 1965
14. Zulfikar Ali Bhutto introduced the policy of nationalization in:  
a. 1975                      b. 1974                      c. 1972                      d. 1977
15. A country produces a large surplus of cotton cloth and sells it to other nations. This activity is an example of:  
a. Import                      b. Domestic trade                      c. Export                      d. Barter trade
16. Determine which climatic region a hot, dry area with less than 250 mm of annual rainfall on the western side of a continent is most likely to be:  
a. Equatorial Region                      b. Monsoon Region                      c. Hot Desert Region                      d. Tundra Region
17. Name the institution in Pakistan responsible for formulating the country's five-year plans for economic development:  
a. State Bank of Pakistan                      c. Planning Commission  
b. Federal Board of Revenue                      d. National Economic Council
18. The primary consequence of the Liaquat-Nehru Pact (1950) was that it:  
a. Resolved the Kashmir dispute permanently  
b. Forced India to give Pakistan its share of financial assets  
c. Mechanism to protect the rights of minorities in both countries  
d. Established the boundary commission for Punjab
19. Compare the reasons for the voyages of Christopher Columbus and Vasco da Gama and identify their common underlying economic motive for European sea exploration during this period:  
a. To spread Christianity around the world  
b. To discover new lands for European settlement  
c. To find new sea routes for trade and access to the wealth of Asia  
d. To conduct scientific research on ocean currents
20. Comparing the economic policies of the Ayub Khan era (1958-1969) and the Zulfikar Ali Bhutto era (1971-1977) reveals a fundamental shift from:  
a. A focus on heavy industry to a focus on cottage industries  
b. A policy of nationalization and state control to a policy of privatization and liberalization  
c. Industrial growth via the private sector to a policy of nationalization and socialist reforms  
d. An agrarian economy to a purely service-based economy

### PART - III (TEACHING & LEARNING PEDAGOGIES)

21 - 40

21. A learner who prefers hands-on lab work and field trips would be classified as:  
a. Visual                      b. Kinesthetic                      c. Aural                      d. Read/Write
22. The teaching method allows free ideas, no criticism:  
a. Case Study                      b. Brainstorming                      c. Story Telling                      d. Team Teaching
23. The teacher delivers his lecture and tells a tale in history class refers to:  
a. Brainstorming                      b. Story Telling                      c. Case Study                      d. Discussion

24. A teacher notices a student remembers diagrams well but **forgets** spoken instructions. Which adaptation fits the student's learning style?
- Provide more text-based notes
  - Offer more physical activities
  - Use colour-coded visual aids
  - Increase oral presentations
25. Vygotsky's concept of the Zone of Proximal Development refers to:
- Skills children can perform independently
  - Skills children can perform with guidance
  - Unlearned reflexive behaviours
  - Tasks beyond a child's capacity
26. A child who is shorter than peers but shows a normal growth rate over time is most likely:
- Experiencing a normal growth variation
  - Malnourished
  - Physically delayed
  - In need of medical intervention immediately
27. In lesson planning, Bloom's Taxonomy is primarily used to:
- Arrange students into groups
  - Define learning objectives
  - Prepare classroom rules
  - Select teaching aids
28. The correct sequence for lesson planning is:
- Activities → SLOs → Assessment
  - SLOs → Activities → Assessment
  - Assessment → Activities → SLOs
  - Activities → Assessment → SLOs
29. The use of praise, nods, and encouraging words by a teacher refers to:
- Reinforcement skill
  - Probing skill
  - Closure skill
  - Introduction skill
30. A teacher asks follow-up questions to deepen a student's response, which refers to:
- Stimulus variation
  - Probing skill
  - Demonstration skill
  - Non-verbal communication skills
31. A quick quiz given at the end of a lesson to check for student understanding is best described as:
- A summative assessment
  - A diagnostic assessment
  - A formative assessment
  - A standardized assessment
32. Feedback is information about a student's progress toward reaching a goal(s). The following are all good sources of Feedback EXCEPT:
- Teacher, parent
  - Peer, book
  - Self, experience
  - Vague comments
33. Why was 'Reading' added to the traditional STREAM model?
- To make the acronym longer
  - To encourage creativity, reading and thinking
  - To reduce focus on English
  - To emphasize only literacy skills
34. In a STEAM project, learners often use programming to design and draw circuit diagrams of an electricity model. Which disciplines are mixed here?
- Science + Arts + Technology
  - Mathematics + History only
  - Engineering + Geography
  - Arts + Physical Education
35. Flipped Learning is a:
- A theory of behaviour
  - A model of instructional design
  - A pedagogical approach that inverts conventional classroom learning
  - A theory of cognition
36. Blended Learning is:
- Digital approach for M-learning in Instructional Design
  - Combines online educational materials and opportunities for interaction online with traditional place-based
  - Conventional notion of classroom-based learning
  - Traditional pedagogical method and approach
37. The following are all the suggestions to make feedback more effective and valuable in terms of student learning EXCEPT:
- Make students understand what a good performance or goal means
  - Providing quality information to students about their learning
  - Simplifies the improvement process of self-assessment or reflections in learning
  - Always use one mode of feedback

38. The following are all the misconceptions about classroom management EXCEPT:
- Classrooms are not homogeneous
  - The quietest classrooms are the best managed
  - The goal of classroom management is peace and discipline
  - Classroom management relies on threats and punishment
39. A teacher notices that 80% of the class missed the same question on a multiple-choice test. The teacher should first conclude that:
- The students did not study enough
  - The question may be poorly worded, or the concept may not have been taught effectively
  - The material was too difficult for this grade level
  - These students are low-achieving
40. Two students are whispering and passing notes during direct teaching. The teacher moves to stand near their desks while continuing to teach. This non-verbal strategy is an example of:
- A logical consequence for their actions
  - Negative reinforcement to extinguish the behaviour
  - Ignoring the behaviour so as not to give it attention
  - Using proximity to manage minor misbehaviour without disrupting the flow of the lesson

#### PART - IV (BIOLOGY)

41 - 52

41. If the checkpoints regulating cell division are altered, the person will most likely get:
- Hypertension
  - Cancer
  - Diabetes
  - Cataract
42. Sara's mother kept fruits in a storage room and observed a certain fungus growth on decaying fruit. Based on the scenario, the fungus would be classified as:
- Parasite
  - Saprophyte
  - Symbiont
  - Autotroph
43. Ahsan felt pain in his throat, for which he was prescribed antibiotics. After a day of taking medicine, he feels better. The infection in such a case can be caused by:
- Fungi
  - Virus
  - Bacteria
  - Protozoa
44. The non-protein part of a conjugate enzyme, if loosely attached, is called:
- Co-factor
  - Active Site
  - Prosthetic group
  - Inhibitor
45. A Scientist observes a cell with proper ATP production and respiratory activity but unassembled proteins. The organelle most likely dysfunctional is:
- Mitochondria
  - Golgi Apparatus
  - Ribosome
  - Endoplasmic Reticulum
46. The process that takes place on the inner membrane of mitochondria is:
- Glycolysis
  - Electron transport chain
  - Production of Pyruvate
  - Decarboxylation of the Acetyl group
47. In a forest, one species of bird diverges into different species adapted to different food sources. Such evolution is inferred as:
- Gradual divergence
  - Convergent evolution
  - Adaptive evolution
  - Parallel evolution
48. If an insecticide is sprayed in a grassland ecosystem, the trophic level directly affected is:
- Producers
  - Primary Consumers
  - Secondary Consumers
  - Tertiary Consumers
49. Algae are placed in a group of plant-like Protists because:
- They move with the help of long flagella
  - They feed on decaying matter
  - They can perform photosynthesis
  - They have a cell wall made of chitin
50. Intensive exercise increases heart rate to supply more oxygen towards the body's muscles. This response shows the coordination between:
- Digestive and Excretory Systems
  - Skeletal and Digestive Systems
  - Respiratory and Circulatory Systems
  - Endocrine and Excretory Systems

51. Evolution is supported by the presence of homologous structure because:

- a. They are vestigial
- b. They show similar functions
- c. They show common ancestry
- d. They arise in response to convergent evolution

52. In an experiment, a student observes that removing algae from a pond decreases the fish population.

This shows that:

- a. Algae harm the population of fish
- b. Algae provide  $\text{CO}_2$  and food for fish
- c. Algae reduce water quality for the survival of the fish population
- d. Algae consume the population of fish

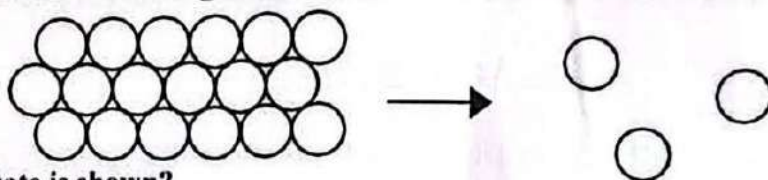
### PART - V (CHEMISTRY)

53 - 64

53. X-rays are produced when cathode rays strike on:

- a. Non - Metal
- b. Metal
- c. Material
- d. Gas

54. The diagram shows how the arrangement of particles changes when a substance changes state.



Which change of state is shown?

- a. Boiling
- b. Condensation
- c. Evaporation
- d. Sublimation

55. The equation shows the thermal decomposition of magnesium carbonate ( $M_r = 84$ ).



Which mass of magnesium oxide is formed when 21.0 g of magnesium carbonate are completely decomposed?

- a. 1.9 g
- b. 4.0 g
- c. 10.0 g
- d. 40.0 g

56. Soap-making process in industries is known as:

- a. Plantation
- b. Saponification
- c. Deposition
- d. Distillation

57. In a Redox (Oxidation-Reduction) reaction, electrons are transferred from:

- a. Oxidizing agent
- b. Reducing agent
- c. Catalyst
- d. Inert Gas

58. A mixture produces a gas both when it reacts with an acid and when it reacts with an alkali. Which ions are present in the mixture?

- a. Ammonium ions and carbonate ions
- b. Ammonium ions and oxide ions
- c. Hydrogen ions and carbonate ions
- d. Hydrogen ions and oxide ions

59. Which of the following changes is endothermic?

- a.  $\text{H}_2(\text{g}) + \text{Cl}_2(\text{g}) \rightarrow 2\text{HCl}(\text{g})$
- b.  $\text{H}_2\text{O}(\text{g}) \rightarrow 2\text{H}_2(\text{g}) + \text{O}_2(\text{g})$
- c.  $\text{H}_2\text{O}(\text{l}) \rightarrow \text{H}_2\text{O}(\text{s})$
- d.  $2\text{H}_2(\text{g}) + \text{O}_2(\text{g}) \rightarrow 2\text{H}_2\text{O}(\text{l})$

60. Which does not increase the rate by affecting the number or nature of collisions?

- a. Adding a catalyst
- b. Increasing the pressure
- c. Increasing the surface area
- d. Increasing the temperature

61. Salts are made by reacting acids with bases. For which combination of acids and bases is the titration method of preparation suitable?

- a. An insoluble acid with an insoluble base
- b. An insoluble acid with a soluble base
- c. A soluble acid with an insoluble base
- d. A soluble acid with a soluble base

2. Which does not describe a reaction at equilibrium?

- a. Forward and backward reactions occur at an equal rate
- b. The system must be closed
- c.  $K_c$  increases as the reaction progresses
- d. Concentrations of reactants and products are constant

63. Which statement does not describe a property of a weak acid in solution?

- a. It forms a salt with sodium hydroxide
- b. It has a pH of between 8 and 9
- c. It is only partly dissociated into ions
- d. It reacts with sodium carbonate to give off carbon dioxide

64. Which row describes the type of bonding present in substances 1 and 2?

	Substance 1	Substance 2
a.	Methane has ionic bonding	Graphite has covalent bonding
b.	Graphite has ionic bonding	Chloride has covalent bonding
c.	Potassium chloride has ionic bonding	Methane has covalent bonding
d.	Potassium chloride has ionic bonding	Graphite has ionic bonding

### PART - VI (PHYSICS)

65 - 76

65. Which of the following is the rate of change of velocity?

- a. Displacement
- b. Speed
- c. Acceleration
- d. Momentum

66. Boyle's law states that at constant temperature:

- a.  $P \propto V$
- b.  $PV = \text{constant}$
- c.  $P \propto T$
- d.  $V \propto T$

67. The velocity of sound is maximum in:

- a. Air
- b. Water
- c. Steel
- d. Vacuum

68. A body of mass 0.5 kg moving with a velocity of 4 m/s has momentum equal to:

- a. 1.0 Ns
- b. 1.5 Ns
- c. 2.0 Ns
- d. 2.5 Ns

69. The speed of sound in air at room temperature is approximately:

- a. 200 m/s
- b. 300 m/s
- c. 340 m/s
- d. 400 m/s

70. If two similar capacitors of 4  $\mu\text{F}$  each are connected in series, the equivalent capacitance is:

- a. 2  $\mu\text{F}$
- b. 10  $\mu\text{F}$
- c. 24  $\mu\text{F}$
- d. 1  $\mu\text{F}$

71. The binary addition of two high bits results:

- a. 11
- b. 01
- c. 00
- d. 10

72. According to Rutherford's model, most of the mass of an atom is concentrated in:

- a. Electrons
- b. Proton cloud
- c. Nucleus
- d. Orbitals

73. The energy possessed by a body due to its motion is:

- a. Potential energy
- b. Kinetic energy
- c. Thermal energy
- d. Work done

74. At what temperature reading do the Fahrenheit and the Celsius temperature scales coincide?

- a. Zero degrees
- b. 100 degrees
- c. 40 degrees
- d. -40 degrees

75. According to Bohr's model, electrons revolve in:

- a. Elliptical orbits
- b. Stationary circular orbits
- c. Random motion
- d. Spiral paths

76. A telescope uses:

- a. Two convex lenses
- b. Two concave lenses
- c. One convex and one concave lens
- d. A combination of a prism and a lens



95. Which one of the following could be a line of code from Machine Language programming?
- a. `print("Hello world")`
  - b. `cout<<"Hello world"`
  - c. `Move I, A`
  - d. `10101110111101111`
96. Select an option of a user interface that is more user-friendly than the other provided options.
- a. MS DOS
  - b. Apple DOS
  - c. GUI
  - d. Linux terminal
97. To uniquely identify a record in a table we need a \_\_\_\_\_ key.
- a. Foreign key
  - b. Composite key
  - c. Primary key
  - d. Table key
98. From the following options, which computing device belongs to the first generation of computers?
- a. IBM 7094
  - b. Electronic Numerical Integrator and Calculator (ENIAC)
  - c. IBM 1401
  - d. Intel Pentium-I
99. If you are asked to classify computers based on their size, which of the following options correctly represents this classification:
- a. Analog, Digital, Hybrid
  - b. General purpose, Special purpose
  - c. Mainframe, mini frame, supercomputer, microcomputer
  - d. Core2, Core2 duo, Core i3
100. Among the following options, which are the five main components of a communication system:
- a. Message, sender, receiver, medium, protocol
  - b. Message, sender, receiver, network, wire
  - c. Sender, receiver, protocol, signal, computer
  - d. Sender, receiver, wire, signal, computer