

IMPORTANT INSTRUCTIONS FOR THE CANDIDATES

The candidates are given the question paper sheets of their chosen subject stream along with an answer sheet (bubble sheet) carrying 100 bubbles in four groups i.e., 25 bubbles (squares) for each subject. They are required to DARK SHADE the correct choice CAREFULLY within the boundary of a BUBBLE. Calculators can be used but **MUST NOT** be shared with others. A candidate can leave the test hall after half time.

Please **DO NOT DETACH** the Bubble Sheet from the Question Paper

ENGLISH

COVID-19 SOPs will follow

Choose the correct answers to the words in underlined CAPITAL letters.

1. I was told that the instructions were easy, but I found them extremely COMPLICATED.
 A. Ridiculous B. Intricate Irrelevant D. Easy
 2. I didn't COMPREHEND the nature of the project until I had read your brief report.
 Contend B. Understand C. Follow D. Embrace
 3. The speaker tried to CONVEY her feelings concerning the urgency of a favorable decision.
 A. Import Communicate C. Assuage D. Summon
 4. The feeling of COMPETITION in the classroom is noticeable to all teachers.
 Cooperation B. Rivalry C. Conquest D. Discovery
 5. Kashaf feels CONFIDENT about her grade on the test she has just taken.
 Sure B. Depressed C. Ecstatic D. Uncertain
 6. That matter is so CONFIDENTIAL that it must not be discussed outside the office.
 A. Alarming Secret C. Important D. Intricate
 7. An increase in CRIMINAL BEHAVIOR is a common result of high unemployment.
 Mistake B. Crime C. Fault D. Error
 8. Neurologists have developed ways to help sufferers COPE WITH dyslexia.
 Deal with B. Dispense with C. Retard D. Cure
 9. The CURRENT edition of the magazine discusses the ancient civilizations of Anatolia.
 Latest B. Special C. First D. Running
 10. The CONGESTION on the streets makes mass transport very desirable in big cities.
 Crucial B. Contamination C. Faux pas D. Crowding
 11. Henry Cavendish CONFIRMED that water is a combination of hydrogen and oxygen.
 Verified B. Researched C. Proposed D. Doubted
 12. CONSCIENTIOUS researchers always pay attention to details while carrying out research.
 Meticulous B. Clever C. Fearless D. Hasty
 13. The coach CONGRATULATED Sidra on her outstanding display of leadership.
 A. Praised Scolded C. Alluded D. Warned
- Pick the correct option from the given choices to fill in the blanks.
14. The accused was released _____ ball.
 A. Up B. Above C. For On
 15. All that _____ is not gold.
 A. Glitters Glitter C. Glittering D. Glittered
 16. Care kills the _____.
 A. Cat B. Dog C. Man Lamb
 17. Cut your coat according to your _____.
 A. Clothes B. Cloth Size D. Shirt
 18. A good face needs no _____.
 A. Paint Contour C. Make up D. Smile
 19. He did hard work and _____.
 Succeed B. Succeeds C. Succeeded D. Has succeeded
 20. Would that I _____ rich.
 A. Was Were C. Am D. Will be
 21. Do you know why an apple _____ down?
 A. Fall Has fall C. Did fall Falls
 22. We tried to tide _____ our difficulties.
 A. Upon B. Up C. Over On
 23. You must comply _____ the teacher's advice.
 By B. For C. To D. With

24. He has used _____ the last book. D. By
 A. For B. On C. To
25. He _____ his breakfast at 9 O' Clock and went to the office. D. Has had
 A. Had B. Would have C. Was having

PHYSICS

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26. If the radius of earth is doubled then the value of critical velocity becomes d) $\frac{1}{2}v_c$
 a) v_c b) $\frac{1}{4}v_c$ c) $2v_c$
27. In dryer, water is pushed out of wet clothes due to d) Undamped Oscillations
 a) Retarding force b) Abundance of centripetal Force
 c) Lack of centripetal force d) Friction
28. The SI unit of flow rate is d) $m^2 s^{-2}$
 a) $m^2 s^{-1}$ b) $m^3 s^{-1}$ c) $m^3 s^{-2}$
29. At which place the motion of a simple pendulum will be slowest d) Lahore
 a) Karachi b) K2 c) Murree
30. Oscillation of shock absorber of a car is a practical example of d) Undamped Oscillations
 a) Damped Oscillation b) Forced Oscillation c) SHM
31. Sound waves cannot be d) diffracted
 a) Reflected b) Refracted c) Polarized
32. The percentage error in the measurement of radius is 1%. The error in the calculated value of volume is d) 1%
 a) 7% b) 5% c) 3%
33. The resultant of two forces 3N and 4N acting at right angles to each other is d) 7N
 a) 5N b) 6N c) 1N
34. Slope of velocity time graph describes a physical quantity called d) Momentum
 a) Displacement b) Average acceleration c) Average velocity
35. The velocity of projectile is maximum at d) Half of the height
 a) Highest point b) Point of projection c) Point of launching
36. At the open end of an organ pipe _____ are formed: d) None of these
 a) Nodes b) Antinodes c) Overtones
37. Angle between the ray of light and wavefront is d) 180°
 a) 0° b) 90° c) 45°
38. The ECG records _____ between points on human skin generated by electric process in the heart d) Voltage
 a) Heart Beat b) Pulse Rate c) Pressure
39. During negative half cycle of AC, PN junction offers d) All of these
 a) High resistance b) Low resistance c) No resistance
40. The term transistor stands for: d) None of these
 a) Transfer of current b) Transfer of voltage c) Transfer of resistance
41. Emission of electrons by metals on heating is called: d) Thermionic emission
 a) Secondary emission b) Field emission c) Photoelectric emission
42. In an electronic transition atom cannot emit d) Visible radiations
 a) Infrared radiations b) γ -radiations c) Ultraviolet radiations
43. The dead time of GM counter is: d) $10^{-4} s$
 a) $10^{-2} s$ b) $10^{-3} s$ c) $10^{-6} s$
44. Mass of meson is: d) Equal to neutron
 a) Less than proton b) Greater than proton c) Equal to proton
45. Two opposite point charges of same magnitude separated by distance 2d, electric potential midway between them is d) 0.5 V
 a) 1V b) 2V c) Zero
46. Resistivity at a given temperature depends upon: d) Both length and area
 a) Area of cross section b) Length c) Nature of material of conductor
47. If the number of turns become double but length remain same, then magnetic field in the solenoid becomes: d) Zero
 a) Half b) Double c) Remain same
48. When the back e.m.f in a circuit is zero, it draws d) Average current
 a) Maximum current b) Zero current c) Minimum current
49. The frequency of AC used in Pakistan is: d) 120 CPS
 a) 50 CPS b) 60 CPS c) 100 CPS
50. A device used to detect very weak magnetic field produced by brain is d) MRI
 a) CAT scan b) SQUID c) CRO

CHEMISTRY

51. Which of the following is not a dehydrating agent? d) P_2O_5
 a) $CaCl_2$ b) Silica gel c) $CaCl_2$

Group-III

Stream 2: Eng, Phys, Chem.

- temperature of gas is doubled and pressure is reduced to one half the volume of gas will be
 a) Remains unchanged V/4 c) 4V d) 2V
- has lowest rate of diffusion He b) H₂ c) O₂ d) N₂
- The strongest acid among halogen acids is HCl b) HBr c) HF d) HI
- feeling uncomfortable breathing in unpressurized cabins is due to
 a) High pressure of CO₂ Low pressure of O₂ c) Low pressure of CO₂ d) Fatigue
- Mass of one mole of electron is
 a) 0.55mg 1.008mg c) 1.6673mg d) 0.184mg
- One mole of SO₂ contains
 a) 18 × 10²³ atoms of oxygen b) 6.02 × 10²³ atoms of sulphur
 6.02 × 10²³ atoms of oxygen d) 4gram atoms of SO₂
- Ascorbic acid is vitamin
 a) A b) B c) E C
- The rate of E1 reactions depend upon
 Concentration Of Substrate b) Concentration of Nu
 c) Both a & b d) None of these
- Which is the best leaving group?
 a) I⁻ Br⁻ c) Cl⁻ d) F⁻
- Value of 6d orbital is
 a) 8 b) 9 c) 10 d) 11
- Born-Haber cycle is a best example of
 a) Boyle's law b) Charles law c) Graham's law Hess law
- In t-butyl alcohol, tertiary carbon is attached bonded to
 a) Two H atoms Three H atoms c) One H atom d) No H atom
- Which one is not a molecular ion?
 a) CH₄⁺ b) NH₄⁺ c) CO⁺ He⁺
- Synthetic rubber is made by polymerization of
 a) Chloroform b) Acetylene c) Divinyl acetylene Chloroprene
- The electrophile in aromatic sulphonation is
 a) H₂SO₄ b) HSO₄⁻ c) SO₂ SO₃⁺
- Benzene cannot undergo
 Substitution reaction b) Addition reaction c) Oxidation reaction Elimination react
- Linear shape is associated with which hybridization?
 a) sp³ sp² c) sp d) dsp²
- Formula of chloroform is
 CHCl₃ b) CH₂Cl c) CH₃Cl₂ d) CCl₄
- Which compound is more reactive?
 a) Ethane b) Ethene c) Ethyne Benzene
- Which compound is more soluble in water?
 a) C₆H₅OH C₂H₅OH c) C₄H₉OH d) C₇H₁₅OH
- % of nitrogen in Urea
 76 b) 46 c) 86 d) 56
- The purpose of ozone is to protect earth from
 R rays b) Cosmic rays c) UV rays d) Visible rays
- The comparative rates at which the solutes moves in the paper chromatography depends upon
 a) Size of paper b) Rf values
 Size of chromatographic tank d) Temperature of experiment
- Allotropy is a property of
 a) Element b) Compound Atom d) Molecule

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MATHEMATICS

76. If - p is true, then p is
 (a) false has no information (c) true (d) equivalent to p
77. A conjunction of two statements p and q is true only if
 (a) p is true both p and q are true (c) q is true (d) both p and q
78. p: Islamabad is a capital of Pakistan q: Lahore is a city of Pakistan, the conjunction p^q is
 (a) false (b) true not valid (d) unknown
79. Disjunction of two statements p and q is true if
 (a) p is false both p and q are false (c) one of p and q is true (d) q is false
80. A disjunction of two statements p and q is false if
 (a) p is false (b) both p and q are false (c) one of p and q is true q is false

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Group-III

Stream 2: Eng, Phys, Chem, Math

81. A decimal which has only finite number of decimal places is called terminating decimal.
 recurring (b) non-recurring (c) non-terminating (d) terminating
82. The additive identity of real numbers is 0.
 (a) 0 (b) 1 (c) 2 (d) 3
83. If order of a matrix A is 2×3 and of matrix B is 3×3 then order of AB is 2×3 .
 (a) 3×2 (b) 2×2 (c) 3×3 (d) 2×3
84. If each element of a matrix is zero, then it is called Null matrix.
 (a) Hermitian (b) Symmetric (c) Null matrix (d) Skew symmetric
85. $[a \ b \ c]$ is a row matrix.
 (a) zero matrix (b) diagonal matrix (c) column matrix (d) row matrix
86. The transpose of a column matrix is a row matrix.
 (a) zero matrix (b) diagonal matrix (c) column matrix (d) row matrix
87. If the sum of the roots of the equation $ax^2 - 2x + 2a - 3 = 0$ is equal to their product, then the value of a is 2.
 (a) 1 (b) 2 (c) 3 (d) 4
88. The common ratio of a geometric sequence cannot be 0.
 (a) 0 (b) 1 (c) 2 (d) n
89. The 5th term of the G.P. 3, 6, 12, ... is 48.
 15 (b) 48 (c) 9 (d) 3
90. The series obtained by adding the terms of a geometric sequence is called the infinite series.
 (a) harmonic series (b) geometric series (c) arithmetic series (d) infinite series
91. For $a, b \in \mathbb{R}$, $a > b$ or $a = b$ or $a < b$ is the trichotomy property of real numbers.
 trichotomy property of real numbers (b) left distributive property of real numbers (c) right distributive property of real numbers (d) cancellation property of real
92. Trichotomy is property of inequality.
 (a) inequality (b) equality (c) division (d) subtraction
93. The sum of an infinite geometric series exists only if the condition on the common ratio r is $-1 < r < 1$.
 (a) $-1 < r < 1$ (b) $-1 \leq r \leq 1$ (c) $r < -1, r > 1$ (d) $-1 \leq r \leq 1$
94. The number 1 is a prime number.
 prime number (b) irrational number (c) even number (d) odd number
95. For any subsets A and B of U , $(A \cap B)^c =$ $A^c \cup B^c$.
 (a) $A \cap B$ (b) $A \cup B$ (c) \emptyset (d) $A^c \cup B^c$
96. If A and B are two sets, then $A - B =$ $A \cap B^c$.
 (a) $A \cup B^c$ (b) $A \cap B^c$ (c) $A \cap B$ (d) $(A \cap B)^c$
97. $P \wedge Q$ is true if both are true. This is known as conjunction.
 (a) conjunction (b) negation (c) disjunction (d) none of the
98. If A is a matrix of order 3×2 then the order of A^T is 2×3 .
 (a) 3×3 (b) 2×3 (c) 2×2 (d) 3×2
99. If A is a matrix of order $n \times n$ and B is a matrix of order $n \times p$ then the order of AB is $n \times p$.
 (a) $p \times m$ (b) $p \times n$ (c) $n \times p$ (d) $m \times p$
100. If A is a matrix of order 3×4 then order of AA^T is 3×3 .
 4×3 (b) 3×4 (c) 4×4 (d) 3×3