

Model Test – II

QUESTION SHEET

GENERAL INSTRUCTION

1. Write your information (Name, Roll. Number, Date etc.) on your Answer Sheet.
2. Do not write anything on your Question Sheet
3. Use given extra loose sheet for rough work.
4. Mark your correct answers by blackening the appropriate bubble against each question on your Answer Sheet.
5. No negative marks will be given for wrong answers.
6. All pages (Question, Answer Sheet) must be submitted after the examination.
7. Duration of Examination is 2 hours.

Read the following passage and answer the following question (1-5) given below.

In the sixteenth century, an age of great marine and terrestrial exploration, Ferdinand Magellan led the first expedition to sail around the world) As a young Portuguese noble, he served the king of Portugal, but he became involved in the quagmire of political intrigue at court and lost the king's favor. After he was dismissed from service to the king of Portugal, he offered to serve the future Emperor Charles V of Spain.

A papal decree of 1493 had assigned all land in the New World west of 50 degrees W longitude to Spain and all the land east of that line to Portugal. Magellan offered to prove that the East Indies fell under Spanish authority. On September 20, 1519, Magellan set sail from Spain with five ships. More than a year later, one of these ships was exploring the topography of South America in search of a water route across the continent. This ship sank, but the remaining four ships searched along the southern peninsula of South America) Finally, they found the passage they sought near a latitude of 50 degrees S. Magellan named this passage the Strait of All Saints, but today we know it as the Strait of Magellan.

One ship deserted while in this passage and returned to Spain, so fewer sailors were privileged to gaze at that first panorama of the Pacific Ocean. Those who remained crossed the meridian we now call the International Date Line in the early spring of 1521 after ninety-eight days on the Pacific Ocean. During those long days at sea, many of Magellan's men died of starvation and disease.

Later Magellan became involved in an insular conflict in the Philippines and was killed in a tribal battle. Only one ship and seventeen sailors under the command of the Basque navigator Elcano survived to complete the westward journey to Spain and thus prove once and for all that the world is round, with no precipice at the edge.

Questions

1. The sixteenth century was an age of great ___ exploration.

a) cosmic	b) land	c) mental	d) common man
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2. Magellan lost the favor of the king of Portugal when he became involved in a political ____.

a) entanglement	b) discussion	c) negotiation	d) problems
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3. The Pope divided New World lands between Spain and Portugal according to their location on one side or the other of an imaginary geographical line 50 degrees west of Greenwich that extends in a ___ direction.

a) north and south	b) crosswise	c) easterly	d) south east
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4. One of Magellan's ships explored the ___ of South America for a passage across the continent.

a) coastline	b) mountain range	c) physical features	d) islands
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5. Four of the ships sought a passage along a southern ____.

a) coast	b) inland
c) body of land with water on three sides	d) border
6. She normally travels ___ a bus to KTM.

a) in	b) on	c) at	d) by
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7. The family is sitting ___ the dining table.

a) At	b) by	c) on	d) with
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8. It is 6 o'clock _____ my watch.
 a) at b) by c) in d) on
9. They enjoyed _____ Christmas.
 a) in b) during c) on d) at
10. It is I whoyour teacher.
 a) is b) am c) are d) has
11. The committee.....the decision.
 a) are making b) were making c) is making d) none of the above
12. I would go shopping if Itime.
 a) have b) had c) have had d) will
13. If you spoke English, you.....get along them perfectly.
 a) will b) would c) would have d) should
14. If they had gone for a walk, they.....the lights off.
 a) would b) will c) would have turned d) might
15. Ramesh always.....his sisters.....their rooms.
 a) Got/tidy b) get/ tidy c) let/ tidying d) makes/ tidy
16. The Johnsons.....the painter.....their house once a year.
 a) Get/painting b) let/ got c) make/ to paint d) have/paint
17. Police made the criminal
 a) To talk b) talked c) talk d) taking
18. Price of oil seems to
 a) raise b) raised c) rise d) rose
19. The government has..... the price of oil.
 a) rose b) raised c) raise d) risen
20. The policethe criminal last week.
 a) hang b) hung c) hanged d) has hunged
21. What is chemical formula of *Lunar caustic*?
 a) AgCl b) AgNO₃ c) NaNO₃ d) HNO₃
22. Which of the following is the common name for *conc. H₂SO₄*?
 a) Blue vitriol b) white vitriol c) Green vitriol d) oil of vitriol
23. The atomic mass unit is defined as
 a) Mass of 1 atom of C-12 b) $\frac{1}{12}$ th mass of 1 atom of C-12
 c) Mass of 1 atom of C-14 d) $\frac{1}{10}$ th mass of an atom of C-12
24. The percentage of hydrogen in water is
 a) 11.11 % b) 88.8% c) 66.6 % d) 25 %
25. Formula of *potassium ferricyanide* is
 a) K₄[Fe (CN)₆] b) K₃[Fe (CN)₆] c) KCNS d) KCN
26. Which of the following is the symbol of *Tungsten*?
 a) U b) V c) W d) X
27. Isotopes have different numbers of
 a) Electrons b) Protons c) Neutrons d) Positrons
28. Carbon dioxide molecules are
 a) Polar b) ionic c) Covalent d) water insoluble
29. Which of the following molecules is electro deficient?
 a) BF₃ b) CO₂ c) NH₃ d) H₂O
30. Which contains both covalent and co-ordinate bond?
 a) NaCl b) CO₂ c) NH₄Cl d) H₂O
31. Proton was first discovered by
 a) J.J. Thomson b) Chadwick c) Goldstein d) None of all
32. The functional group of amines is
 a) -NH₂ b) -CONH₂ c) -CHO d) -COR
33. Each member of homologous series has different:
 a) Functional group b) Molecular formula
 c) Melting point d) Chemical Properties
34. The aromatic compound has
 a) Alternate single & double bond b) Only single bond
 c) Alternate double & triple bond d) None of above
35. is the example of
 a) Aromatic compound b) Alkane

- c) Cycloalkane d) All of above
36. If $P(E)$ is the probability that an event will occur, which of the following must be false?
 a) $P(E) = 1$ b) $P(E) = \frac{1}{2}$ c) $P(E) = \frac{1}{3}$ d) $P(E) = -1$
37. The larger root of the equation $(x + 4)(x - 3) = 0$ is:
 a) -4 b) -3 c) 3 d) 4
38. Which one of the following lines intersects with $2x + 3y + 4 = 0$?
 a) $x - y + 1 = 0$ b) $4x + 6y + 9 = 0$
 c) $2x + 3y + 2 = 0$ d) $6x + 9y + 10 = 0$
39. The n^{th} term of the series $84 + 78 + 72 + \dots$ is 0. The value of n is:
 a) 12 b) 14 c) 15 d) 20
40. What is the slope of the line through the points $(0, -1)$ and $(-4, 2)$?
 a) $-\frac{3}{4}$ b) $-\frac{4}{3}$ c) $\frac{4}{3}$ d) $\frac{3}{4}$
41. If $x^2 + 2x - 8 = 0$, then which one of the following must be true?
 a) $x = 0$ b) $x = 2, -4$ c) $x = 1, -8$ d) $x = -2, 4$
42. In a hockey league, 87 players play on seven different teams. Each team has at least 12 players. What is the largest possible number of players on any one team?
 a) 13 b) 14 c) 15 d) 21
43. When 20 is subtracted from -4 , the result is:
 a) 24 b) 16 c) -16 d) -24
44. If the point $(2, 6)$ is reflected over the x -axis, the coordinates of the image point will be:
 a) $(-2, 6)$ b) $(2, -6)$ c) $(6, -2)$ d) $(-2, -6)$
45. If $3x^2 - 7y + 6$ is subtracted from $4x^2 - 3y + 4$, the result is:
 a) $7x^2 - 10y + 10$ b) $x^2 - 10y - 2$ c) $x^2 + 4y - 2$ d) $-x^2 - 4y + 2$
46. If the measure of an exterior angle of a regular polygon is 120° , how many sides does the polygon have?
 a) 3 b) 4 c) 5 d) 6
47. A square is circumscribed about a circle. What is the ratio of the area of the circle to the area of the square?
 a) $\frac{1}{4}$ b) $\frac{1}{2}$ c) $\frac{\pi}{2}$ d) $\frac{2}{\pi}$
48. If $\frac{a}{b} = \frac{2}{3}$, then $\frac{5a-4b}{3a+2b} =$
 a) $1 : 6$ b) $-1 : 6$ c) $\frac{3}{2}$ d) $-\frac{3}{2}$
49. What is the value of $\left(\frac{a^l}{a^m}\right)^{l+m} \times \left(\frac{a^m}{a^n}\right)^{m+n} \times \left(\frac{a^n}{a^l}\right)^{n+l}$?
 a) 0 b) 1 c) a^{l+m-n} d) a^{2m}
50. If V, p and q are the volume, radius of the base and height, respectively, of a cylinder, which of the following relationships is true?
 a) $V = \pi qp^2$ b) $V = \pi pq$ c) $V = pq$ d) $V = \pi pq^2$
51. Which of the following expressions represents the ratio between the lateral surface area and total surface area of a cube?
 a) $2 : 3$ b) $3 : 2$ c) $3 : 4$ d) $4 : 3$
52. Find the value of k so that the equation $3x^2 + kx - 2 = 0$ has roots whose sum is equal to 6:
 a) 0 b) 6 c) 8 d) -18
53. What is the average of 6, 6, 66, 66, 666, 666, 6666, 6666, 66666, 66666, 666666, 666666?
 a) 11111 b) 12345 c) 111111 d) 123456
54. Which one of the following is correct?
 a) $2^6 - 1$ is a prime b) $2^7 - 1$ is not a prime
 c) $2^8 - 1$ is a prime d) $2^{11} - 1$ is not a prime
55. Between which two numbers is $\sqrt{850}$?
 a) 28 and 29 b) 29 and 30 c) 425 and 426 d) 849 and 851
56. The gravitational force between two bodies of mass m_1 and m_2 , separated by distance d is given by $F = G \frac{m_1 m_2}{d^2}$, where G is gravitational constant. The dimension of G is
 a) $[M^{-1}L^3T^{-1}]$ b) $[M^{-1}L^3T^{-2}]$ c) $[M^{-1}L^{-1}T^{-2}]$ d) dimension less
57. Which of the following is a derived unit?
 a) Unit of mass b) Unit of length c) Unit of time d) Unit of volume
58. A particle is in motion. For its motion in a certain time, displacement covered is
 a) always equal to distance covered b) always less than distance covered
 c) greater than distance covered d) less than or equal to distance covered

59. The acceleration of a particle can be found from
 a) slope of displacement time curve b) area under displacement time curve
 c) slope of velocity–time curve d) area under velocity–time curve
60. The initial velocity of a body is 5m/s whose acceleration is 1m/s². What is the distance covered in 10 seconds.
 a) 350m b) 250m c) 100m d) 50m
61. The displacement of a particle along a straight line at time t is given by $s = bt + ct^2$; the acceleration of particle is
 a) b b) c c) 2b d) 2c
62. Two bodies are in thermal equilibrium then they must have same
 a) Heat b) Mass c) Temperature d) All
63. At what temperature will the kelvin scale double the Fahrenheit reading?
 A. -40 F b) 32F c) 353.4F d) 176.7F
64. Absolute Zero temperature is
 a) -273 C b) -459.4F c) 0k d) All
65. If the difference in temperature of 27 °C, what will be the equivalent change in kelvin
 a) (273+27) K b) 45K c) 300K d) 27K
66. Electric current in a circuit is represented by an arrow. Current is
 a) a scalar b) a vector
 c) sometime a scalar and sometime vector d) neither scalar nor vector
67. One horsepower is equal to
 a) 746 watts b) 748 watts c) 756 watts d) 736 watts
68. Which planet in our solar system has the largest number of moons?
 a) Uranus b) Saturn c) Jupiter d) Neptune
69. What will be the value of equivalent resistance of 3ohm and 6-ohm in parallel combination?
 a) 9-ohm b) 6-ohm c) 2-ohm d) 3-ohm
70. Which among the following is true about ohm's law?
 a) $I \propto V$ b) $I = V/R$ c) $V = IR$ d) All of these
71. Five kingdom system of classification was proposed by...
 a) Mendel b) Morgan c) Meyer d) Whittaker
72. Prokaryotic cell does not include...
 a) Ribosome b) Mitochondria c) Cytoplasm d) Genetic material
73. Cell theory was proposed by...
 a) Schwann and Schleiden b) Hutchinson
 c) Robert Hooke d) Takhtajan
74. First to observe living cell under the microscope is
 a) Anton von Leuwenhoek b) Robert Hooke
 c) Louis Pasteur d) Robert Koch
75. Which is not a feature of fungi?
 a) Heterotrophic b) Autotrophic c) Saprophytic d) Parasitic
76. Which of the following is a monocot plant?
 a) Rose b) Dandelion c) Tulip d) Maple
77. What is the female reproductive organ of a flower called?
 a) Stamen b) Anther c) Petiole d) Pistil
78. The organs with similar structures and different functions are known as...
 a) Analogous organs b) Vestigial organs c) Atavistic organs d) Homologous organs
79. Which of the following pairs is incorrect?
 a) Physiology=Study of physical structures b) Cytology=Study of cells
 c) Ornithology=Study of birds d) Cnidology=Study of coelenterates
80. Mitral valve is situated in between:
 a) Right atrium and left atrium b) Right atrium and right ventricle
 c) Left atrium and left ventricle d) Pulmonary artery and pulmonary vein
81. Scientific name of mango is:
 a) *Brassica campestris* b) *Mangifera indica* c) *Solanum tuberosum* d) *Shorea robusta*
82. Which is not an animal tissue?
 a) Epithelial b) Connective c) Meristematic d) Nervous
83. Which of the following animals is cold-blooded?
 a) Dog b) Cat c) Bird d) Fish
84. What is the primary function of antennae in insects?
 a) Locomotion b) Digestion c) Reproduction d) Sensory perception

85. Which of the following animals is not a vertebrate?
 a) Frog b) Octopus c) Fish d) Penguin
86. Who is often credited with building the first programmable computer, the Analytical Engine?
 a) Alan Turing b) Charles Babbage c) John von Neumann d) Ada Lovelace
87. Ada Lovelace is often credited with writing the first algorithm intended to be processed by a machine. Which machine was she writing for?
 a) Analytical Engine b) ENIAC c) Colossus d) UNIVAC I
88. Which type of device is commonly used for both input and output?
 a) Mouse b) Scanner c) Monitor d) Microphone
89. Which organization developed ChatGPT?
 a) Microsoft b) Google c) Facebook d) OpenAI
90. Which of the following is an example of system software?
 a) Microsoft Word b) Adobe Photoshop c) Scandisk d) Google Chrome
91. Which operating system is developed by Apple Inc.?
 a) Windows b) Linux c) MacOS d) Android
92. Which of the following is not a function of an operating system?
 a) Memory Management b) File Management
 c) Peripheral Management d) Word Processing
93. Which function of an operating system involves protecting the system resources from unauthorized access?
 a) Security Management b) Process Management
 c) Peripheral Management d) Memory Management
94. Which function of an operating system involves scheduling tasks to be executed by the CPU?
 a) File Management b) Process Management
 c) Memory Management d) Peripheral Management
95. Who is the CEO of Microsoft Corporation as of 2022?
 a) Sundar Pichai b) Tim Cook c) Satya Nadella d) Mark Zuckerberg
96. What does the acronym "GPT" stand for in "ChatGPT"?
 a) General Processing Task b) Generative Pre-trained Transformer
 c) Global Pattern Transformation d) Graphical Processing Technique
97. What is the base of the binary number system?
 a) 8 b) 10 c) 2 d) 16
98. What is the decimal equivalent of the binary number 1011?
 a) 5 b) 8 c) 10 d) 11
99. What is software?
 a) Physical components of a computer b) Instructions that tell a computer what to do
 c) Human-readable data d) Storage devices
100. Which of the following best defines a program?
 a) A set of physical components in a computer b) Set of instructions that perform a specific task
 c) An input device d) A storage device

- The End -

Answer Key

QN	Answer	QN	Answer	QN	Answer	QN	Answer
1	B	26	C	51	A	76	C
2	A	27	C	52	D	77	D
3	A	28	C	53	D	78	D
4	C	29	A	54	D	79	A
5	C	30	C	55	A	80	C
6	D	31	C	56	B	81	B
7	A	32	A	57	D	82	C
8	B	33	B	58	D	83	D
9	D	34	A	59	C	84	D
10	B	35	C	60	C	85	B
11	C	36	D	61	D	86	B
12	B	37	C	62	C	87	A
13	B	38	A	63	D	88	C
14	C	39	C	64	A	89	D
15	D	40	A	65	D	90	C
16	D	41	B	66	A	91	C
17	C	42	C	67	A	92	D
18	C	43	D	68	B	93	A
19	B	44	B	69	C	94	B
20	C	45	C	70	D	95	C
21	B	46	A	71	D	96	B
22	D	47	C	72	B	97	C
23	B	48	B	73	A	98	D
24	A	49	B	74	A	99	B
25	B	50	A	75	B	100	B