

20. What does the proverb "Empty vessels make the most noise." mean?
- Silence is golden.
 - Noisy environment are distracting and unproductive
 - A person's true intelligence is revealed through action.
 - People who talk a lot have nothing important to say.

PHYSICS

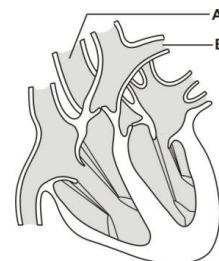
21. The velocity of a body is given as $v = x + yt$. The dimensional formula of x is:
- [L]
 - [T]
 - $[LT^{-1}]$
 - $[TL^{-1}]$
22. Which of the following is vector quantity?
- K.E
 - Electric Potential
 - Pressure
 - Linear momentum
23. If the displacement is directly proportional to square of time then the body has
- Uniform velocity
 - Uniform acceleration
 - Uniform K.E.
 - Zero velocity
24. If the velocity of a body is increased by 2% then the kinetic energy
- Increases by 4%
 - Increases by 3%
 - Increases by 2%
 - Increases by 8%
25. If a man can lift 120N load on the surface of earth, the mass he can lift on the surface of moon is
- 12 Kg
 - 36 Kg
 - 72 Kg
 - 720 Kg
26. Upthrust of liquid depends upon
- Volume of liquid displaced
 - Density of body
 - Acceleration due to gravity
 - All of the above
27. The temperature at which Celsius scale reading coincide with Fahrenheit scale reading is
- -32°C
 - -40°C
 - 574°C
 - 372°C
28. Two resistors each of resistance 2Ω are connected first in series then in parallel. The ratio of equivalent resistance connected in series to that in parallel is,
- 2:1
 - 1:2
 - 1:4
 - 4:1
29. Which of the following is not a unit of time
- Lunar month
 - Leap year
 - Solar day
 - Light year
30. Which one of the Newton's law is most general
- first law
 - second law
 - third law
 - none
31. The work done on a body does not depend upon
- displacement
 - force applied
 - angle between force and displacement
 - initial velocity of the body
32. The value of G depends on
- mass of earth only
 - radius of earth only
 - mass and radius of earth both
 - a constant independent of mass and radius of earth
33. For a body floating in water, the apparent weight is –
- actual weight of body
 - weight of liquid displaced
 - weight of body – weight of liquid displaced
 - zero
34. High temperature is measured by
- mercury thermometer
 - gas thermometer
 - pyrometer
 - sphygmanometer
35. The specific heat of same substance is expressed in two units i.e. C_1 cal/g $^{\circ}\text{C}$ and C_2 cal/g $^{\circ}\text{F}$, which of the following relation is true
- $C_1 > C_2$
 - $C_1 < C_2$
 - $C_1 = C_2$
 - C_1 and C_2 can not be compared

CHEMISTRY

36. Glass is a:
a. supercooled liquid b. crystalline solid c. amorphous solid d. organic polymer
37. The lightest metal is:
a. Li b. Fe c. Cu d. Ag
38. Which of the following compound is used in photography?
a. AgI b. AgCl c. AgF d. AgBr
39. Which of the following compound is also called Marsh gas?
a. Methane b. Ethane c. Glycerol d. Propane
40. If the atomic number of an element is 17, its electronic configuration is:
a. 2, 8, 7 b. 2, 8, 6, 1 c. 2, 6, 6, 3 d. 2, 8, 5, 2
41. Which nonmetal conducts electricity?
a. Sulphur b. Graphite c. Chlorine d. Iodine
42. The reaction $\text{CH}_4 + \text{O}_2 \longrightarrow \text{CO}_2 + \text{H}_2\text{O} + \Delta$ is an example of:
a. endothermic reaction b. exothermic reaction
c. athermic reaction d. both b. and c.
43. The percentage of carbon in Calcium carbonate is
a. 12% b. 40% c. 48% d. 100%
44. The Valency of ammonium radical is:
a. 1 b. 2 c. 3 d. 4
45. Atomic number of an element indicates:
a. no. of e^- s in the nucleus b. no of neutrons in the nucleus
c. valency of an element d. no. of protons in the nucleus
46. Which of the following is the most electronegative element?
a. oxygen b. chlorine c. fluorine d. nitrogen
47. The total no. of electrons that take part for the bond formation in N_2 molecules is
a. 6 b. 3 c. 7 d. 10
48. Atom A has 3 valence electrons while atom B has 6 valence electrons, the compound formed will be:
a. A_2B_6 b. AB_2 c. A_2B_3 d. A_3B_2
49. General formula of alkene is:
a. $\text{C}_n\text{H}_{2n-2}$ b. C_nH_{2n} c. $\text{C}_n\text{H}_{2n+2}$ d. C_nH_n
50. The waste material present in an ore is called
a. flux b. alloy c. gangue d. alga

BIOLOGY

51. Structures labeled as A and B are
a. pulmonary artery and pulmonary vein
b. aorta and pulmonary artery
c. aorta and pulmonary vein
d. superior venacava and pulmonary arter
52. Which blood cell is commonly called Erythrocyte?
a. Red Blood Cell b. White Blood Cell c. Platelets d. monocyte
53. AIDS is not transmitted by
a. injection blood transfusion b. coughing & sneezing
c. needle used by drug addicts d. sexual contact
54. Xerophytes are the plants which are:
a. found in moist habitat b. found in water
c. found in the region of scarcity of water d. found in air



55. Which one of the following is a male reproductive part of the flower?
 a. Calyx b. Corolla c. Androecium d. Gynoecium
56. 9 : 3 : 3 : 1 is the Mendels:
 a. Monohybrid ratio b. Dihybrid ratio c. Polyhybrid ratio d. All of the above
57. Amoeba belongs to kingdom
 a. Protista b. Fungi c. Plantae d. Monera
58. The female reproductive bee in a colony is called
 a. Drone b. Worker c. Queen d. Soldier
59. The father of genetics is
 a. Charles Darwin b. Gregor Johann Mendel
 c. Aristotle d. Louis Pasteur
60. Genes are located on
 a. Ribosomes b. Cytoplasm c. Chromosomes d. Vacuoles

MATHEMATICS:

61. Which one of the following is correct:
 a. Mode = 3 Mean – 2 Median b. Mean = 3 Median – 2 Mode
 c. Mode = 3 Median – 2 Mean d. Mode = 3 Median + 2 Mean
62. If A and B are two sets containing 3 and 6 distinct elements respective, the minimum number of elements in $A \cup B$ is:
 a. 9 b. 6 c. 3 d. 0
63. The sum of length of any two sides of a triangle is:
 a. less than the length of third side b. greater than the third side
 c. equal to the length of third sides d. has no relation
64. The angle between the lines pair $xy = 0$ is:
 a. 60° b. 90° c. 0° d. 120°
65. Cost of 5 pen and 10 copies is Rs. 145. If the cost of each copy is Rs 12, find out the cost of such 1 dozen pen.
 a. Rs.30 b. Rs.144 c. Rs.36 d. Rs.60
66. If a, b, c are in G.P and $a^x = b^y = c^z$, then $1/x + 1/z$ is
 a. $2/y$ b. $1/y$ c. y^2 d. none
67. What is the probability of an impossible event?
 a. 1 b. 0.5 c. $1/4$ d. 0
68. If p and q are primes numbers greater than 2, which of the following must be true?
 I) $p + q$ is even II) pq is odd III) $p^2 - q^2$ is even
 a. I only b. II only c. I and II only d. I, II and III
69. The roots of which of the following quadratic equations are imaginary?
 a. $x^2 - 6x + 5 = 0$ b. $x^2 - 4x + 3 = 0$ c. $x^2 + x + 1 = 0$ d. $4x^2 + 8x - 5 = 0$
70. Which of the following is not a indeterminate form?
 a. $0/0$ b. ∞/∞ c. $1/0$ d. 0^0
71. If A has 2 elements & B has 3 elements, the Cartesian product of A & B will have elements.
 a. 2 b. 3 c. 6 d. 8
72. If $\tan x = \tan \alpha$,
 a. $x = 2n\pi \pm \alpha$ b. $x = n\pi + \alpha$ c. $x = 2n\pi + \alpha$ d. $x = 2n\pi - \alpha$
73. The data collected by the investigator himself are called.....data.
 a. Primary b. zertiary c. Secondary d. crude

74. If selling price of a Philips earphone is Rs. 450 and VAT amount is Rs. 45, find VAT percent
 a. 10% b. 11.5% c. 10.5% d. 9.5%
75. In Roman 972 is written as:
 a. CMLXII b. MCLXXII c. CMLXXV d. None of above

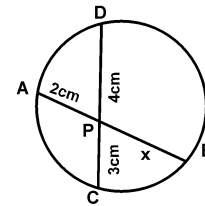
76. If $\sin A = \frac{1}{2}$ and A is acute, then the value of $\tan A$ is

- a. 1 b. $\frac{1}{\sqrt{3}}$ c. 0 d. $\sqrt{3}$

77. If $g^2 + f^2 - c = 0$ in the second degree equation $x^2 + y^2 + 2gx + 2fy + c = 0$, the equation represents:
 a. Unit circle b. Imaginary circle c. Point circle d. Real circle

78. Find the value of x in the adjoining figure.

- a. 4
 b. 5
 c. 6
 d. 8



79. If $A = [-3, 2)$ and $B = (0, 5]$; then $A \cap B$ is equal to:

- a. $[-3, 5]$ b. $[0, 2]$ c. $(0, 2)$ d. $(0, 1]$

80. If $2^{x+3} = 32$, then the value of 3^{x+2} is:

- a. 5 b. 9 c. 27 d. 81

81. If $f = \{(1,4), (2,5), (3,5)\}$ and $g = \{(4,8), (5,7), (6,9)\}$ then $g \circ f$ is

- a. $\{(1,8), (2,7), (3,7)\}$ b. $\{(1,7), (2,7), (3,5)\}$
 c. $\{(1,3), (2,4), (3,9)\}$ d. $\{(1,5), (2,8), (3,9)\}$

82. The relation between AM, GM and HM between two unequal positive numbers is

- a. $AM < GM < HM$ b. $AM \leq GM \leq HM$
 c. $AM \geq GM \geq HM$ d. $AM > GM > HM$

83. If A is a matrix of size $m \times n$ and B is a matrix of size $n \times p$, then size of AB is

- a. $m \times n$ b. $n \times p$ c. $m \times p$ d. $p \times m$

84. If $A = \begin{pmatrix} 1 & 0 \\ 0 & 1 \end{pmatrix}$ and $B = \begin{pmatrix} 1 & 2 \\ 3 & 4 \end{pmatrix}$ then AB is equal to

- a. $\begin{pmatrix} 1 & 3 \\ 2 & 4 \end{pmatrix}$ b. $\begin{pmatrix} 1 & 4 \\ 3 & 2 \end{pmatrix}$ c. $\begin{pmatrix} 1 & 3 \\ 4 & 2 \end{pmatrix}$ d. $\begin{pmatrix} 1 & 2 \\ 3 & 4 \end{pmatrix}$

85. The condition for polynomial equation $ax^2 + bx + c = 0$ to be quadratic is

- a. $a < 0$ b. $a \neq 0$ c. $a > 0$ d. $a = 0$

86. The formula for $\tan 2A$ is

- a. $\frac{2\tan A}{1-\tan^2 A}$ b. $\frac{2\tan A}{1+\tan^2 A}$ c. $\frac{\tan A}{2-\tan^2 A}$ d. $\frac{1+\tan^2 A}{1-\tan^2 A}$

87. The equation of the bisectors of the angles between the co-ordinates axes are

- a. $y = 0, x = 0$ b. $y = 2x$ c. $y = x^2$ d. $y = \pm x$

88. The distance between the lines $4x + 3y = 11$ and $8x + 6y = 15$ is

- a. $\frac{7}{10}$ b. $\frac{7}{2}$ c. $\frac{7}{3}$ d. 2

89. The obtuse angle between the lines $y = -2$ and $y = x + 2$ is

- a. 120° b. 135° c. 150° d. 160°

90. The probability that the leap year contains 53 Sundays is

- a. $\frac{1}{7}$ b. $\frac{3}{7}$ c. $\frac{2}{7}$ d. $\frac{4}{7}$

GK/IQ

91. If QUICK is coded as PSFYF, how is NEST coded?
a. MCPP b. MCCP c. NCPP d. MPCP
92. Which number should come next in this series? 25, 24, 22, 19, 15
a. 4 b. 5 c. 10 d. 14
93. The largest national park in Nepal is
a. Chitwan National Park b. Bardia National Park
c. Rara National Park d. Foksundo National Park
94. When is "World Health Day" celebrated?
a. 5th April b. 8th April c. 7th April d. 6th April
95. When was Balendra Shah elected as the prime minister of Nepal?
a. 2082 Chaitra, 13 b. 2082 Chaitra, 14 c. 2082 Chaitra, 15 d. 2082 Chaitra, 16
96. Who is the writer of present National Anthem of Nepal?
a. Siddhi Charan Shrestha b. Gopal Yonjan c. Byakul Maila d. Alok Shree
97. What is the maximum number of players who can play in a badminton tournament?
a. 3 b. 2 c. 5 d. 4
98. Which one of the following sites is not a search engine?
a. Bing b. Google c. Sagoon d. Myspace
99. What is the tallest mountain in the world?
a. Mount K2 b. Mount Everest
c. Mount Kilimanjaro d. Denali
100. How many teeth does an adult human have?
a. 28 b. 30 c. 32 d. 26

Best of Luck