ALLEN SHARP

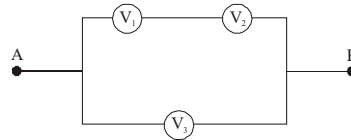**ALLEN's Scholarship Test and Reward Program**

SAMPLE TEST PAPER

Class X

ALLEN CAREER INSTITUTE
KOTA (RAJASTHAN)
path to success

1. Three voltmeters all having different resitances are joined as shown. When some potential difference is applied across A and B then readings in voltmeter are V_1, V_2 and V_3 :

(1) $v_1 = v_2$ (2) $v_1 < v_2$ (3) $v_1 + v_2 = v_3$ (4) $v_1 + v_2 > v_3$

2. AB is a long wire carrying a current I_1, and PQRS is rectangular loop carrying current I_2 (as shown in the figure). Which among the following statements are correct?
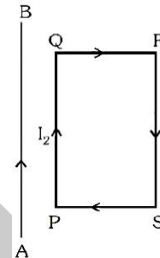
(1) Arm PQ will get attracted to wire AB, and the arm RS will get repelled from wire AB.

(2) Arm PQ will get repelled from wire AB and arm RS attracted to weir AB.

(3) Forces on the arms PQ and RS wll be unequal and opposite.

(4) Forces on the arms OR arid SP will be zero.

(1) only (a)   (2) (b) and (c)   (3) (a) and (c)   (4) (b) and (d)

3. Three equal resistors connected in series across a source of emf dissipate 10 watt. If the same resistors are connected in parallel across the same emf, the power dissipated will be :-

(1) 10 watt   (2) 30 watt   (3) $\frac{10}{3}$ watt   (4) 90 watt

4. A bulb of (220 V, 60 W) is operated on 110V supply then power developed in it is :-
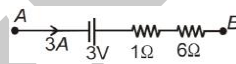
(1) 15 W   (2) 30 W   (3) 65 W   (4) 60 W

5. The reading of ideal ⓥ connected across R in the circuit shown below is :
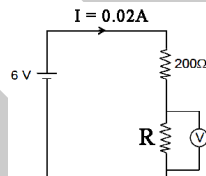
(1) 1 V   (2) 2 V   (3) 3 V   (4) 4 V

6. What is potential difference across AB?

(1) 24 V   (2) 0 V   (3) 6 V   (4) 18 V

7. A comb run through one's dry hair attracts small bits of paper. This is due to :-

(1) comb is a good conductor

(2) paper is a good conductor

(3) the atoms in the paper gets polarised by the charged comb

(4) the comb possesses magnetic properties

8. A long wire carries a steady current. It is then bent into a circle of one turn and magnetic field at the centre of coil is B. Then it is bent into n-turns Magnetic field at centre of coil will be :-
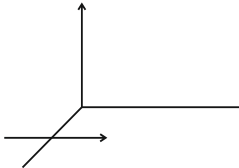
(1) $2n^2B$ (2) 2nB   (3) n^2B (4) nB
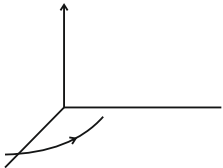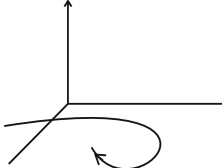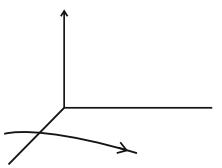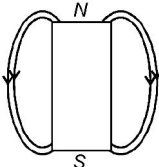
9. A wire of resistance R is stretched to twice of its original length. Its new resistance will be :-

(1) 4R   (2) R/4   (3) 2R   (4) R/2

10. In the circuit given below the ratio of current flowing in the upper arm 'R' and lower arm 'R' will be :
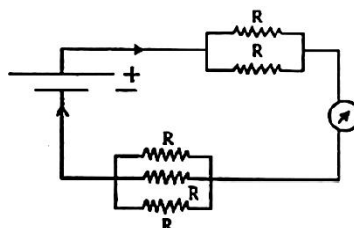
(1) $\frac{2}{3}$ (2) $\frac{5}{3}$ (3) $\frac{3}{2}$ (4) $\frac{1}{5}$

11. Vm^{-1} is the unit of :-

(1) Potential
(2) Electric field intensity
(3) Electric current
(4) Electric potential energy

12. A high energy electron enters into a strong magnetic field which is perpendicular to its velocity plane. Choose the correct path it is expected to move along :-

(1)   (2)   (3)   (4)

13. Whai wili be the power consumed by a 25Ω wire if it is put across a mains of 250 volts?

(1) 2.5 kw
(2) 25 kw
(3) 2.5 w
(4) 25 w

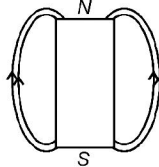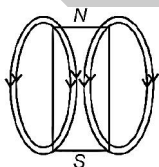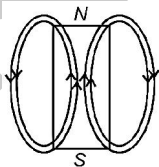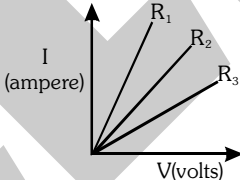**14.** A charged particle placed in an electric field falls from rest through a distance d in time t If the charge on the particle is doubled, the time of fall through the same distance will be (neglect gravity) :-

(1) 2t
(2) t
(3) $\dfrac{t}{\sqrt{2}}$
(4) $\dfrac{t}{2}$

15. The magnetic field lines due to a bar magnet are correctly shown in :

(a)   (b)   (c)   (d)

(1) a
(2) b
(3) c
(4) d

16. A student carries out an experiment and plots the V-I graph of three samples of nichrome wire with resistances R_1, R_2 and R_3 respectively. Which of the following is true?

(1) $R_1 = R_2 = R_3$
(2) $R_1 > R_2 > R_3$
(3) $R_2 > R_3 > R_1$
(4) $R_3 > R_2 > R_1$

17. A cylindrical conductor of length ℓ and uniform area of cross-section A has resistance R. Another conductor of length 2ℓ and resistance R of the same material has area of cross-section :-

(1) A/2
(2) 3A/2
(3) 2A
(4) 3A

18. At any point, the magnetic field lines are in the direction of :-

(1) the magnetic force on a moving negative charge
(2) the velocity of a moving positive charge
(3) the velocity of a moving negative charge
(4) none of the above

19. A uniform magnetic field cannot :-

(1) change the momentum of a charged particle
(2) change the kinetic energy of a charged particle
(3) exert a force on a charged particle moving perpendicularly to the magnetic field
(4) change the velocity of a charged particle

20. Commercial electric motors do not use :-

(1) an electromagnet to rotate the armature
(2) effectively large number of turns of conducting wire in the current-carrying coil
(3) a permanent magnet to rotate the armature
(4) a soft iron core on which the coil is wound

21. The major problem in harnessing nuclear energy is how to :-
(1) split nuclei?
(2) sustain the reaction?
(3) dispose off spent fuel safely?
(4) convert nuclear energy into electrical energy?

22. A ray of light incident on one of the parallel faces of rectangular glass slab, emerges out of the opposite parallel face :-
(1) inclined to the incident ray.
(2) along the same straight line as the incident ray.
(3) parallel to the incident ray but laterally displaced.
(4) gets absorbed into the body of the glass slab and does not emerge out of it.

23. The lateral displacement of an incident ray passing out of a rectangular glass slab, for the same angle of incidence :-
(1) is directly proportional to the thickness of the glass slab.
(2) is inversely proportional to the thickness of the glass slab.
(3) is independent of the thickness of the glass slab.
(4) none of the above options is correct.

24. A 10 mm long awl pin is placed vertically in front of a concave mirror. A 5 mm long image of the awl pin is formed at 30 cm in front of the mirror. The focal length of this mirror is :-
(1) – 30 cm
(2) – 20 cm
(3) – 40 cm
(4) – 60 cm

25. The bluish colour of water in sea is due to :-
(1) the presence of algae and other plants found in water
(2) scattering of light
(3) reflection of sky in water
(4) absorption of light by the sea

26. Which one of the given is correct?
(1) Bases turns blue litmus paper red
(2) Aqueous solutions of bases cannot conduct electricity
(3) Bases react with certain metals to form hydrogen gas
(4) None of these

27. $PbCl_2 + Na_2SO_4 \rightarrow PbSO_4 + NaCl$
The above reaction is an example of :-
(1) combination
(2) double displacement
(3) decomposition
(4) displacement

28. When Ag is exposed to air it gets black spots of :-
(1) $AgNO_3$
(2) Ag_2S
(3) $AgCl$
(4) $AgCO_3$

29. BHA stands for :-
(1) Butane hydro amide
(2) Butoxy hydro anisole
(3) Butylated hydroxy anisole
(4) Butane hydrogen amide

30. The ability of metals to be drawn into thin wire is known as :-
(1) Ductility
(2) Malleability
(3) Sonorousity
(4) Conductivity

31. Which of the given oxide(s) of iron would be obtained on prolonged reaction of iron with steam?
(1) FeO
(2) Fe_2O_3
(3) Fe_3O_4
(4) Fe_2O_3 and Fe_3O_4

32. An alloy is :-
(1) An element
(2) A compound
(3) A homogeneous mixture
(4) A heterogeneous mixture

33. Although metals form basic oxides, which of the given metals form an amphoteric oxide?
(1) Na
(2) Ca
(3) Al
(4) Cu

34. The electronic configurations of three elements X, Y and Z are X : 2, 8; Y : 2, 8, 7 and Z : 2, 8, 2. Which of the given is correct?
(1) X is a metal
(2) Y is a metal
(3) Z is a non-metal
(4) Y is a non-metal & Z is a metal

35. Formation of carbon disulphide from carbon and sulphur takes place by :-
(1) absorption of heat
(2) evolution of heat
(3) no change in heat content
(4) None of these

36. A student added dilute HCl to a test tube containing zinc granules and made following observations :
I. The zinc surface became dull and black.
II. A gas evolved which burnt with a pop sound.
III. The solution remained colourless.
Correct observations are :-
(1) I and II
(2) I and III
(3) II and III
(4) I, II and III

37. Which of the following is a redox reaction?
(1) $CaCO_3 \longrightarrow CaO + CO_2$
(2) $Fe + CuSO_4 \longrightarrow FeSO_4 + Cu$
(3) $CaO + 2HCl \longrightarrow CaCl_2 + H_2O$
(4) $NaOH + HCl \longrightarrow NaCl + H_2O$

38. Lead nitrate on heating gives :-
(1) lead oxide
(2) nitrogen dioxide
(3) oxygen
(4) all of these

39. Acetic acid is a weak acid because :-
(1) its aqueous solution is acidic.
(2) it is highly ionized.
(3) it is weakly ionized.
(4) it contains –COOH group.

40. Phenolphthalein is :-
(1) yellow in acidic medium, pink in basic medium.
(2) pink in acidic medium, colourless in basic medium.
(3) colourless in acidic medium, pink in basic medium.
(4) pink in acidic medium, yellow in basic medium

41. When zinc reacts with sodium hydroxide, the products formed are :-
(1) zinc hydroxide and sodium.
(2) sodium zincate and water.
(3) sodium zincate and hydrogen gas.
(4) sodium zincate and oxygen.

42. Which of the following metals form amphoteric oxide?
(1) Copper
(2) Silver
(3) Aluminium
(4) Iron

43. The reactivities of iron, magnesium, sodium and zinc towards water are in the following order :-
(1) Fe > Mg > Na > Zn
(2) Zn > Na > Mg > Fe
(3) Na > Mg > Zn > Fe
(4) Mg > Na > Fe > Zn

44. Cinnabar is an ore of :-
(1) Hg
(2) Cu
(3) Pb
(4) Zn

45. Copper and tin are consituent of :-
(1) bronze
(2) german silver
(3) brass
(4) none of these

46. Cl, Br I, if this is a Dobereiner's triad and the atomic masses of Cl and I are 35.5 and 127 respectively. The atomic mass of Br is :-
(1) 162.5
(2) 91.5
(3) 81.25
(4) 45.625

47. An atom has an electronic configuration 2, 8, 5. To which of the following elements would it be chemically similar?
(1) F (9)
(2) Na (11)
(3) N (7)
(4) Ar (18)

48. Which has the maximum atomic radius?
(1) Al
(2) Si
(3) P
(4) Mg

49. Which of the following elements will form acidic oxide?
(1) Sodium
(2) Magnesium
(3) Aluminium
(4) Sulphur

50. CH_3COOH aqueous solution turns phenolphthalein solution :-
(1) pink
(2) yellow
(3) colourless
(4) orange

51. Any positive even integer is of the form :-
(1) 4q + 1
(2) 4q + 3
(3) 4q or 4q + 2
(4) 4q + 5

52. If HCF of 210 and 55 is of the form (210) (5) + 55 y, then y = ?
(1) – 19
(2) – 18
(3) 5
(4) 55

53. If one zero of the quadratic polynomial $(k - 1) x^2 + kx + 1$ is -4, then the value of k is :-

(1) $\dfrac{-5}{4}$ (2) $\dfrac{5}{4}$ (3) $\dfrac{-4}{3}$ (4) $\dfrac{4}{3}$

54. If one of the zeros of the cubic polynomial $x^3 + ax^2 + bx + c$ is -1, then the product of the other two zeros is :-

(1) $b - a + 1$ (2) $b - a - 1$ (3) $a - b + 1$ (4) $a - b - 1$

55. The pair of linear equations $7x - 3y = 4$, $3x + \dfrac{k}{7} y = 4$ is consistent only when :-

(1) $k = 9$ (2) $k = -9$ (3) $k \neq -9$ (4) $k \neq 7$

56. The pair of equations $5x - 15y = 8$ and $3x - 9y = \dfrac{24}{5}$ has :-

(1) One solution   (2) Two solutions
(3) Infinitely many solutions   (4) No solution

57. The sum of the digits of a two-digit number is 9. If 27 is added to it, the digits of the number get reversed. The number is :-

(1) 25   (2) 72   (3) 63   (4) 36

58. In $\triangle ABC$, $\angle B = 90°$. If $AB = 14$ cm and $AC = 50$ cm then tan A equals :-

(1) $\dfrac{24}{25}$ (2) $\dfrac{24}{7}$ (3) $\dfrac{7}{24}$ (4) $\dfrac{25}{24}$

59. The value of $\dfrac{\sin 29°}{\cos 61°} - \dfrac{\sin 61°}{\cos 29°}$ is :-

(1) Zero   (2) 1   (3) $\dfrac{61}{29}$ (4) $\dfrac{29}{61}$

60. If in two triangles DEF and PQR, $\angle D = \angle Q$ and $\angle R = \angle E$, then which of the following is not true?

(1) $\dfrac{EF}{PR} = \dfrac{DF}{PQ}$ (2) $\dfrac{DE}{PQ} = \dfrac{EF}{RP}$ (3) $\dfrac{DE}{QR} = \dfrac{DF}{PQ}$ (4) $\dfrac{EF}{RP} = \dfrac{DE}{QR}$

61. In figure, two lines segments AC and BD intersect each other at the point P such that PA = 6 cm, PB = 3 cm, PC = 2.5 cm, PD = 5 cm, $\angle APB = 50°$ and $\angle CDP = 30°$. Then, $\angle PBA$ is equal to :
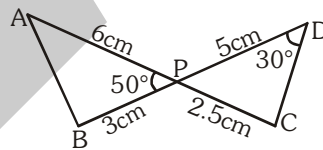
(1) 50°   (2) 30°   (3) 60°   (4) 100°

62. The mean of the following data $1^2, 2^2, 3^2, \ldots\ldots n^2$ is :-

(1) $\dfrac{(n + 1)(2n + 1)}{6}$ (2) $\dfrac{n(n - 1)(2n + 1)}{6}$ (3) $\dfrac{n(n + 1)(2n - 1)}{6}$ (4) $\dfrac{n(n - 1)(2n - 1)}{6}$

63. Which of the following is true :-

(1) Mode = 3Median + 2Mean   (2) Median = Mode + $\dfrac{3}{2}$ [Mean – Median]

(3) Mean = Mode + $\dfrac{3}{2}$ [Median – Mode]   (4) Median = Mode + $\dfrac{3}{2}$ [Median + Mode]

64. Solve for x :
$6x^2 + 40 = 31x$

(1) $\dfrac{3}{8}, \dfrac{2}{5}$ (2) $\dfrac{3}{8}, \dfrac{3}{2}$ (3) $0, \dfrac{8}{3}$ (4) $\dfrac{8}{3}, \dfrac{5}{2}$

65. A plane left 40 minutes late due to bad weather and in order to reach it's destination, 1600 km away in time, it had to increase it's speed by 400 km/h from it's usual speed. Find the usual speed of the plane :-

(1) 600 km/h   (2) 750 km/h   (3) 800 km/h   (4) None of these

66. From a point on a bridge across a river, the angles of depression of the banks on opposite sides of the river are 30° and 45° respectively. If the bridge is at a height of 3 m from the banks then the width of the river is :-

(1) $3(\sqrt{3}-1)$ m   (2) $3(\sqrt{3}+1)$ m   (3) $(3+\sqrt{3})$ m   (4) $(3-\sqrt{3})$ m

67. As observed from the top of a 75 m high lighthouse from the sea-level, the angles of depression of two ships are 30° and 60°. If one ship is exactly behind the other on the same side of the lighthouse then the distance between the two ships is :-

(1) $25\sqrt{3}$ m   (2) $75\sqrt{3}$ m   (3) $50\sqrt{3}$ m   (4) None of these

68. To divide a line segment AB in the ratio 3 : 8, first a ray AX is drawn so that ∠BAX is an acute angle and then points $A_1, A_2, A_3, \ldots\ldots$ are located at equal distances on the ray AX and the point B is joined to :-

(1) A_{12} (2) A_{11} (3) A_3 (4) A_8

69. If the numbers a, b, c, d, e form an AP then the value of a – 4b + 6c – 4d + e is equal to :-

(1) 1   (2) 2   (3) 0   (4) None of these

70. If $\dfrac{5+9+13+\ldots\text{to n terms}}{7+9+11+\ldots\text{to}\,(n+1)\,\text{terms}} = \dfrac{17}{16}$, then n = ?

(1) 8   (2) 7   (3) 10   (4) 11

71. An unbiased die is thrown. The probability of getting a multiple of 3 is :-

(1) $\dfrac{1}{6}$ (2) $\dfrac{1}{3}$ (3) $\dfrac{3}{6}$ (4) $\dfrac{4}{6}$

72. In figure below, PA and PB are the two tangents drawn to the circle. O is the centre of the circle. A and B are the points of contact of the tangents PA and PB with the circle. If ∠OPA = 35°, then ∠POB is :
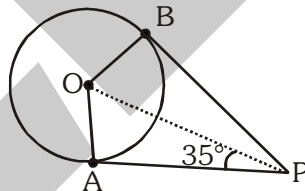
(1) 55°   (2) 65°   (3) 75°   (4) 85°

73. A (5, 1), B(1, 5) and C (–3, –1) are the vertices of ΔABC. The length of its median AD is :-

(1) $\sqrt{34}$ (2) $\sqrt{35}$ (3) $\sqrt{37}$ (4) 6

**74.** In the given figure, the area of shaded region is :

28cm
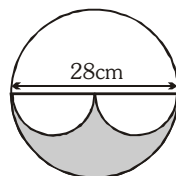
(1) 462 cm²   (2) 308 cm²   (3) 616 cm²   (4) 154 cm²

75. A conical tent with base-radius 7 m and height 24 m is made from 5 m wide canvas. The length of the canvas used is : (Take $\pi = \dfrac{22}{7}$)

(1) 100 m   (2) 105 m   (3) 110 m   (4) 115 m

76. Dark reaction in photosynthesis is called so because :-
(1) It doe snot re quire light energy
(2) Cannot occur during daytime
(3) Occurs more rapidly atnight
(4) It can also occur in darkness

77. Large st gland in human b o dy is :-
(1) Liver   (2) Pancreas   (3) Pituitary   (4) Thyroid

78. Saliva has the enzyme :-
(1) Pepsin   (2) Ptyalin   (3) Trypsin   (4) Rennin

79. Muscular partition present between thorax and abdomenis :-
(1) Pericardium   (2) Pleura   (3) Epiglottis   (4) Diaphragm

80. Skin is an a c c e ssory re spiration in :-
(1) Humans   (2) Frog   (3) Rabbit   (4) Lizard

81. Glycolysis occurs in :-
(1) Cytoplasm   (2) Mitochondria   (3) Chloroplasts   (4) Golgi complex

82. Oxygenated blood is carried by :-
(1) Pulmonary vein   (2) Pulmonary artery   (3) Hepaticportalvein   (4) Renal vein

83. In a closed circulatory system blood is completely enclosed within :-
(1) The skeleton   (2) Sinuses   (3) Vessels   (4) Hearts

84. The transpirationinplantswiJl be lowest :-
(1) When there is high humidity in the atmosphere
(2) There is excess of water in the cell
(3) Environmental condition share very dry humidity
(4) High wind velocity

85. Basic fflterationunit of kidney is :-
(1) Ureter   (2) Glomerulus   (3) Urethra   (4) CoUe cling tubule

86. Contractile vacuole of woeoatakespartin :-
(1) Locomotion   (2) Digestion of food   (3) Ingestion of food   (4) Osmoregulation

87. Excess of water in urine resulting from kidney failure is known as :-
(1) Ureotelic   (2) Uricotelic   (3) DiabetesMalitus   (4) Diabetes insipidus

88. Emergency hoimone is :-
(1) Thyroxin   (2) Growth hormone   (3) Adrenalin   (4) Insuline

89. Select the correct match from the following :-
(1) Thyroxin: Ovary
(2) Growth hormone: Pituitary
(3) Insulin: Thyroid
(4) Testosterone: Pancreas

90. Cerebellumispartof :-
(1) Midbrain
(2) Fore brain
(3) Hindbrain
(4) Peripheral nervous system

91. Number of cranialnerves is :-
(1) 36   (2) 24   (3) IS   (4) 12

92. Sugarcane is multiplied by :-
(1) Seeds   (2) Root cuttings   (3) Stem cuttings   (4) Leaves

93. The gra ft e d p ortion o f a plant is c alle d :-
(1) Stalk   (2) Stock   (3) Layer   (4) Scion

94. Gestation period in human is :-
(1) 270 days   (2) 290 days   (3) 200 days   (4) 245 days

95. On germina t ion e a ch p ollen grain pro due e s :-
(1) One male gamete
(2) Two male gametes
(3) Triree male gametes
(4) Four male gametes

96. An artificial ecosystem is :-
(1) Lake   (2) Ocean   (3) Aquarium   (4) Forest

97. Amount of energy transfened from one trophic level to the next is :-

(1) 1.5%   (2) 10%   (3) 15%   (4) 20%

98. The book "Origin of Species by Natural Selection" was written by :-

(1) Oparin   (2) Wallace   (3) Darwin   (4) Darwin and Wallace

99. Mendel worked on :-

(1) Pisum   (2) Solatium   (3) Lathyrus   (4) Dolichos

100. Breeding experiment dealing with a single trait is called :-

(1) Dihybrid   (2) Monohybrid   (3) Monozygous   (4) Heterozygous

101. The sum of the ages of a son and father is 56 years. After four years, the age of the father will be three times that of the son. Their ages respectively are :-

(1) 12 years, 44 years   (2) 16 years, 42 years   (3) 16 years, 48 years   (4) 18 years, 36 years

102. In a certain code language, BORN is written as APQON and LACK is written as KBBLK. How will the word GRID be written in that code language?

(1) FSHCD   (2) HSJED   (3) FOHCD   (4) FSHED

103. Complete the given series: 23, 48, 99, 203, 413, __?__

(1) 927   (2) 837   (3) 937   (4) 437

104. In each of the following questions, choose the correct mirror-image of the fig (X). from amongst the four alternatives (1), (2), (3) and (4) given along with it.
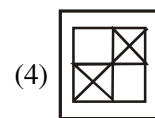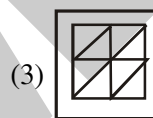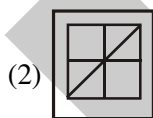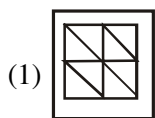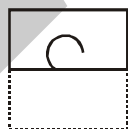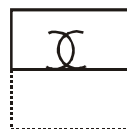

105. In each of the following problems, a square transparent sheet with a pattern is given on the left side. Figure out from amongst the four alternatives as to how the pattern would appear when the transparent sheet is folded at the dotted line.
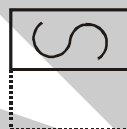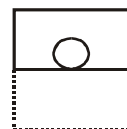

106. Study the following information carefully and answer the given questions below :

Anil walks 15m from point A towards the east to reach point B. Then he takes right turn and walks for 20m to reach point C. Now he takes a left turn and walks for 15m to reach point D. Then he takes a left turn and walks for 10m to reach point E. Then he takes a left turn and walks for 20m to reach point F. Now he takes a right turn and walks for 5m to reach point G. Then he takes a left turn and walks for 10m to reach point H.

If M is 5 metre to the north of G. then Point B is at what distance and in which direction with respect to point M?

(1) 5m, South   (2) 10m, West   (3) 15m, North   (4) 5m, East

107. Study the following information carefully and answer the questions given below.

B is the daughter of A. A is married to C. D is the brother of A. E is the only son of D. F is the grandmother of E.F has no daughter. How C is related to E?

(1) Uncle   (2) Aunt   (3) Nephew   (4) Son-in law

108. In the question below is given a statement followed by two conclusions numbered I and II. You have to assume everything in the statement to be true, then consider the two conclusions together and decide which of them logically follows from the information given in the statement.
(1) Either conclusion I or conclusion II follows
(2) Only conclusion I follow
(3) Both conclusion I and conclusion II follows
(4) Only conclusion II follows
Statements :
Some Themes are Songs
Some Songs are Music
No Music is a Lyric
All Lyrics are Films
Conclusions :
(I) No Song is a Film
(II) Some Films are Song

109. Study the following arrangement carefully and answer the questions given below :
N R 3 1 & S 5 M I 9 P 6 # B 2 A $ K O 8 Z @ C 4 ® U λ 7 Y H
How many such symbols are there in the above arrangement, each of which is immediately preceded by a consonant but not followed by a number?
(1) None   (2) One   (3) Two   (4) Three
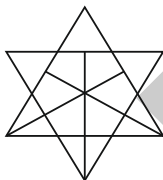
110. On what dates of April, 2001 did Wednesday fall?
(1) 3rd, 10th, 17th, 24th   (2) 4th, 11th, 18th, 25th
(3) 2nd, 9th, 16th, 23rd, 30th   (4) 1st, 8th, 15th, 22nd, 29th

111. How much does a watch lose per day, if its hands coincide every 64 minutes?

(1) $32\frac{8}{11}$ minutes   (2) $36\frac{5}{11}$ minutes   (3) 90 minutes   (4) 96 minutes

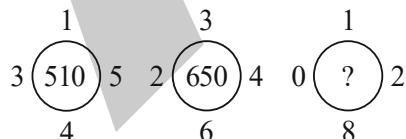**112.** In the following question number of triangle are :

(1) 21   (2) 23   (3) 25   (4) 27

113. If '+' stands for 'multiplication', '<' stands for 'division', '÷' stands for 'subtractions', '–' stand for 'addition' and '×' stands for 'greater' than. Identify which expression is correct?
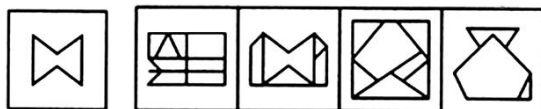(1) 20 - 40 + 4 + 8 < 2 × 26   (2) 20 × 8 + 15 < 5 ÷ 9 - 8
(3) 20 < 2 + 10 ÷ 4 - 6 × 100   (4) 20 < 5 + 25 ÷ 10 - 2 × 96

114. Which one will replace the question mark?

(1) 660   (2) 670   (3) 610   (4) 690

115. Find out the alternative figure which contains figure (X) as its part.
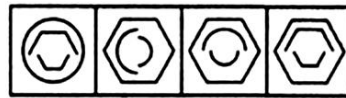

(1) A   (2) B   (3) C   (4) D

116. Each of the following questions consists of two sets of figures. Figures A, B, C and D constitute the Problem Set while figures 1, 2, 3, 4 and 5 constitute the Answer Set. There is a definite relationship between figures A and B. Establish a similar relationship between figures C and D by selecting a suitable figure from the Answer Set that would replace the question mark (?) in fig. (D). Select a suitable figure from the Answer Figures that would replace the question mark (?).

Problem Figures :   Answer Figures :


  (A)   (B)   (C)   (D)   (1)   (2)   (3)   (4)

117. Each of the following questions consists of two sets of figures. Figures A, B, C and D constitute the Problem Set while figures 1, 2, 3, 4 and 5 constitute the Answer Set. There is a definite relationship between figures A and B. Establish a similar relationship between figures C and D by selecting a suitable figure from the Answer Set that would replace the question mark (?) in fig. (D). Select a suitable figure from the Answer Figures that would replace the question mark (?).

Question Figure :
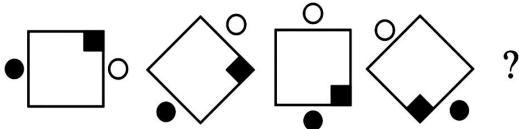
Answer Figure :
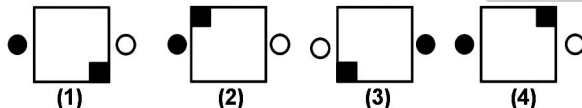
    (1)   (2)   (3)   (4)

118. A cube has six different symbols drawn over its six faces. The symbols are dot, circle, triangle, square, cross and arrow. Three different positions of the cube are shown in figures X, Y, and Z. Which symbol is opposite the arrow?

    (X)   (Y)   (Z)

(1) Circle   (2) Triangle   (3) Dot   (4) Cross

119. A cube is cut in two equal parts along a plane parallel to one of its faces. One piece is then coloured red on the two larger faces and green on the remaining, while the other is coloured green on two smaller adjacent faces and red on the remaining. Each is then cut into 32 cubes of same size and mixed up. What is the number of cubes with at least one green face each?

(1) 36   (2) 32   (3) 38   (4) 48

120. How many such pairs of letters are there in the word 'INSTRUCTION' which have as many letters between them in the word as in the English alphabet?

(1) One   (2) Two   (3) Three   (4) Four