

NATIONAL TALENT SEARCH EXAMINATION (FIRST LEVEL) 2019

411 – B

SCHOLASTIC APTITUDE TEST

(For Students of Class X)

Date : 04/11/2018

Time : 120 Minutes

Max. Marks : 100

(For Blind Candidates Time : 2 Hours 30 Minutes)

INSTRUCTIONS TO CANDIDATES

Read the following instructions carefully before you open question booklet.

1. Answers are to be given on a **separate answer sheet (OMR sheet.)**
2. Please write your **Roll Number** as allotted to you in the admission card very clearly on **the test-booklet** and darken the appropriate circles on the **answer sheet** as per instructions given.
3. There are 100 questions in this test. All are compulsory. The questions numbers 1 to 13 belong to Physics, 14 to 26 Chemistry, 27 to 33 Botany, 34 to 40 Zoology, 41 to 60 Mathematics, 61 to 71 History, 72 to 82 Geography, 83 to 93 Political Science and 94 to 100 are on Economics subjects.
4. Please follow the instructions given on the answer sheet for marking the answers.
5. If you do not know the answer to any question, do not waste time on it and pass on to the next one. Time permitting, you can come back to the questions, which you have left in the first instance and attempt them.
6. Since the time allotted for this question paper is very limited, you should make the best use of it by not spending too much time on any one question.
7. **Rough work** can be done **on the given Blank Pages at the back of the booklet** but not on the answer sheet/loose paper.
8. Every correct answer will be awarded one mark. There will be no negative marking.
9. **Please return the Answer sheet (OMR) only to the invigilator after the test.**
10. Hindi version of the question paper will be considered as final in case of any dispute arising out of variation in translated version.



Piprali Road, Sikar

Phone : 01572-241911, 242911 Mob. No. : 97832-62999

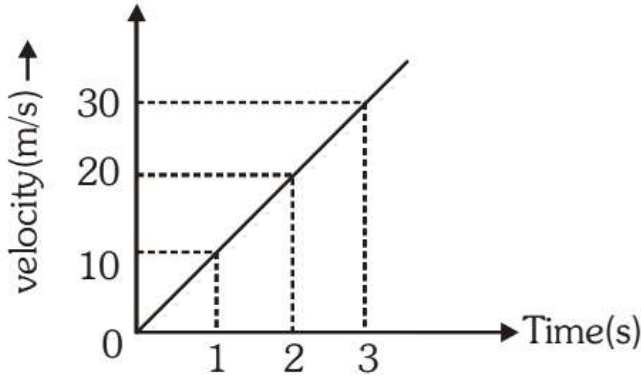
Website : www.matrixhighschool.org

1. The inertia of a body depends upon
 (1) Gravitational acceleration (2) Centre of gravity of body
 (3) Shape of body (4) Mass of body

Ans. (4)

Sol. Inertia of a body depends on mass. Higher the mass higher will be inertia.

2. Velocity-time graph of a body moving with uniform acceleration is shown in the diagram. The distance travelled by the body in 3 seconds is



- (1) 90 m (2) 45 m (3) zero (4) 10 m

Ans. (2)

Sol. Area of velocity-time graph will give the distance travelled, so area of velocity-time graph in 3 seconds =

$$\text{Distance(s)} = \frac{1}{2} \times 3 \times 30 = 45 \text{ meter.}$$

3. The distance between two masses is to be halved. The gravitational force between them will be–

- (1) Double (2) One-fourth (3) Quadruple (4) Half

Ans. (3)

Sol. As the distance between two masses is halved gravitational force quadruple

$$= \frac{Gm_1m_2}{r^2}$$

$$r' = \frac{r}{2}$$

$$F' = \frac{Gm_1m_2}{r'^2} = \frac{Gm_1m_2}{(r/2)^2} = \frac{4Gm_1m_2}{r^2}$$

$$F' = 4F$$

4. Which statement is correct among the following for gravitational acceleration (g) due to earth?

- (1) The value of g is equal at poles and equatorial circle
 (2) The value of g is more at poles than at equatorial circle
 (3) The value of g is more at equatorial circle than at poles
 (4) None of these

Ans. (2)

Sol. Gravity at the surface of earth $g = \frac{Gm_e}{R^2}$

Radius at equator (R_e) > Radius at pole (R_p)

so, $g_{\text{pole}} > g_{\text{equator}}$

5. Which waves are used in the device "SONAR" ?

- (1) Audible waves (2) Ultrasound waves
 (3) Infrasound waves (4) Light waves

Ans. (2)

Sol. 'SONAR' uses ultrasound waves.

6. The speed of a waves is 350 m/s and wavelength is 70 cm. The frequency of wave is
 (1) 500 Hz (2) 700 Hz (3) 50 Hz (4) 200 Hz

Ans. (1)

Sol. Wave velocity = 350 m/s
 Wave length = 70 cm = 0.7 m
 $v = f\lambda$

$$f = \frac{v}{\lambda} = \frac{\text{wave velocity}}{\text{wave length}} = \frac{350}{0.7} = 500 \text{ Hz}$$

7. Which defect in human eye arises due to the irregularities in spherical shape of cornea ?

- (1) Cataract (2) Hypermetropia or long sightedness
 (3) Myopia or short sightedness (4) Astigmatism

Ans. (4)

Sol. Due to irregularities in the shape of cornea Astigmatism occurs.

8. Focal length a convex lens is +40 cm. The power of this lens will be—

- (1) +4 dioptre (2) +2.5 dioptre (3) +40 dioptre (4) +25 dioptre

Ans. (2)

Sol. $\text{Power} = \frac{1}{\text{focal length}}$

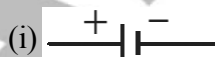
$$P = \frac{1}{40\text{cm}} = \frac{100}{40} = 2.5 \text{ dioptre}$$

9. Match the electric devices given in **Column-A** with their symbols shown in **Column-B**.

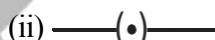
Column-A

Column-B

(1) Voltmeter



(2) Rheostat



(3) Electric cell



(4) Plug key



(1) (1) – (iii), (2) – (i), (3) – (iv), (4) – (ii)

(2) (1) – (iii), (2) – (iv), (3) – (ii), (4) – (i)

(3) (1) – (iii), (2) – (ii), (3) – (i), (4) – (iv)

(4) (1) – (iii), (2) – (iv), (3) – (i), (4) – (ii)

Ans. (4)

Sol. Voltmeter →

Rheostat →

Electric cell →

Plug key →

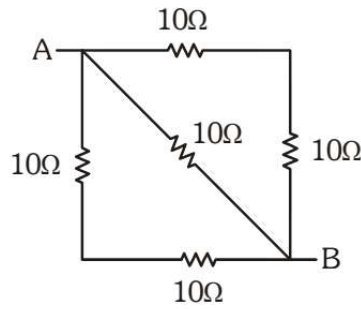
10. Which one of the following is not a part of Direct current generator ?

- (1) Commutator (2) Sliprings (3) Armature (4) Carbon brushes

Ans. (2)

Sol. Slip rings are not part of direct current generator. These are used to generate alternating current.

11. The equivalent resistance of the given circuit between points A and B is



- Ans. (1) 40 Ω (2) 4 Ω (3) 5 Ω (4) 0.2 Ω

Sol. $\frac{1}{R_{eq}} = \frac{1}{20} + \frac{1}{10} + \frac{1}{20}$

$$\frac{1}{R_{eq}} = \frac{1+2+1}{20}$$

$$R_{eq} = \frac{20}{4} = 5\Omega$$

12. If 4 joule work is to be done is stretching a spring by 4 cm then spring constant of the spring is—

- Ans. (1) 5×10^3 N/m (2) 5×10^4 N/m (3) 2×10^3 N/m (4) 2×10^4 N/m

Sol. $W = \frac{1}{2} kx^2$

$$4 \text{ Joule} = \frac{1}{2} k \left(\frac{4}{100} \right)^2$$

$$k = 5 \times 10^3 \text{ N/m}$$

13. The electric device which is having more use time and less electricity consumption is—

- Ans. (1) Incandescent Bulb (2) CFL (3) LED (4) Tubelight

Sol. LED is a semiconductor device which uses less electricity consumption and highly efficient.

14. Homogeneous mixture among the following is

- Ans. (1) milk (2) cloud (3) smoke (4) air

Sol. Air is homogeneous mixture of N_2 , O_2 , CO_2 , Ar etc.

15. The substance showing sublimation property among the following is:

- Ans. (1) common salt (2) copper sulphate (3) potassium nitrate (4) camphor

Sol. The substance showing sublimation property is camphor.

16. Number of molecules present in 32 g of O_2 is :

- Ans. (1) 6.022×10^{23} (2) 3.011×10^{23} (3) 1.51×10^{23} (4) 6.022×10^{22}

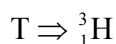
Sol. Mole of $O_2 = \frac{32}{32} = 1$ mole

$$\text{Number of molecules} = 1 \times N_A = 6.022 \times 10^{23} \text{ molecules of } O_2.$$

17. Number of neutrons in isotope of hydrogen, tritium is
 (1) 0 (2) 1 (3) 2 (4) 3

Ans. (3)

Sol. Hydrogen isotope 'Tritium' consists 2 neutrons



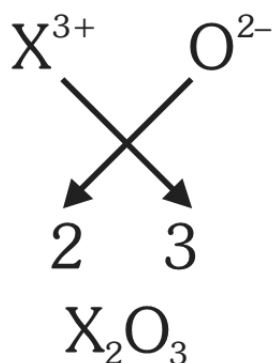
$$\text{Neutrons} = 3 - 1 = 2$$

18. The formula of chloride of an element X is XCl_3 . The formula of its oxide will be :

- (1) XO_2 (2) XO_3 (3) X_2O_3 (4) X_3O_2

Ans. (3)

Sol. The formula of chloride of an element X is XCl_3 . Then formula its oxide will be X_2O_3 .

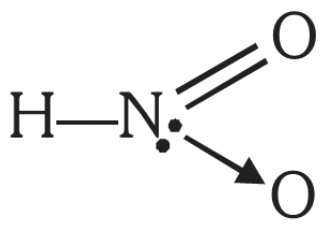


19. Molecule containing coordinate covalent bond among the following is

- (1) H_2O (2) HNO_3 (3) BaCl_2 (4) CaO

Ans. (2)

Sol.



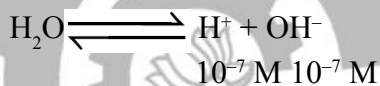
HNO_3 consists of Co-ordinate bond between N & O.

20. Concentration of hydrogen and hydroxy ions in mole/litre for pure water is:

- (1) 1×10^{-7} (2) 2×10^{-7} (3) 1×10^{-14} (4) 1×10^{-6}

Ans. (1)

Sol. At room temperature and 1 atm pressure, On self/auto ionization of water:



$$[\text{H}^+] = [\text{OH}^-] = 1 \times 10^{-7} \text{ M}$$

21. The compound used for removal of acidity in stomach is

- (1) NaCl (2) MgCl_2 (3) $\text{Mg}(\text{OH})_2$ (4) CaCl_2

Ans. (3)

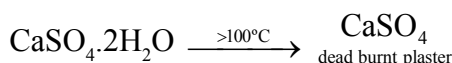
Sol. To decrease the acidity of stomach, we can use $\text{Mg}(\text{OH})_2$, $\text{Al}(\text{OH})_3$, NaHCO_3 compounds.

22. The chemical formula of dead burnt plaster is :

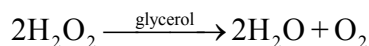
- (1) $\text{CaSO}_4 \cdot \frac{1}{2} \text{H}_2\text{O}$ (2) $\text{CaSO}_4 \cdot 2\text{H}_2\text{O}$ (3) $\text{CaSO}_4 \cdot \text{H}_2\text{O}$ (4) CaSO_4

Ans. (4)

Sol. If gypsum is heated above 100°C then



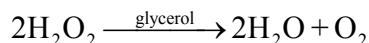
23. Which type of catalyst is glycerol in the following reaction ?



(1) Positive catalyst (2) Negative catalyst (3) Biocatalyst (4) Autocatalyst

Ans. (2)

Sol. In decomposition of H_2O_2 , glycerol behaves as negative catalyst.



24. Element having highest atomic radius among the following is

(1) Li (2) Be (3) B (4) C

Ans. (1)

Sol. Order of atomic radius $\text{Li} > \text{Be} > \text{B} > \text{C}$

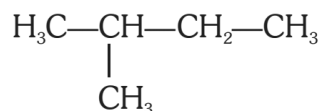
$$\text{Effective nuclear charge } e \propto \frac{1}{\text{Atomic radius}}$$

25. IUPAC name of isopentane is

(1) 2-ethyl propane (2) pentane (3) 2-methyl butane (4) 2,2-dimethyl propane

Ans. (3)

Sol. Isopentane :



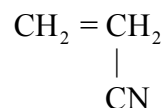
2-Methyl butane

26. The polymer of acrylonitrile is

(1) Polythene (2) Polyvinyl chloride (3) Polyvinyl cyanide (4) Polystyrene

Ans. (3)

Sol. The polymer of acrylonitrile is



27. The cell organelle discovered by de Duve is

(1) Plastid (2) Ribosome (3) Lysosome (4) Centrosome

Ans. (3)

Sol. De duve discovered lysosome.

28. The examples of hydrophytes are:

(1) Hydrilla, Calotropis (2) Lotus, Salsola
(3) Moss, Lichen (4) Segetaria, Trapa

Ans. (4)

Sol. Segetaria and Trapa are hydrophytes.

29. Number of male gametes in the growing pollen tube is

(1) one (2) two (3) three (4) seven

Ans. (2)

Sol. Pollen tube carries two male gametes inside ovule.

30. The main method of reproduction in Yeast is

(1) Budding (2) Sporogenesis (3) Cutting (4) Grafting

Ans. (1)

Sol. Yeast mainly reproduces by budding.

31. The number of biosphere reserves established in India is:

(1) 18 (2) 118 (3) 142 (4) 669

Ans. (1)

Sol. The number of biosphere reserves established in India is 18.

32. The bark of which plant is used as medicine ?
 (1) Aloe vera (2) Terminalia arjuna (3) Curcuma longa (4) Papaver somniferum
 Ans. (2)
 Sol. Terminalia arjuna bark is used as medicine.
33. In which year was Indian Space Research Committee changed into Indian Space Research Organisation ?
 (1) 1965 (2) 1969 (3) 1975 (4) 1981
 Ans. (2)
 Sol. ISRO established on 15 August 1969.
34. Bacterial disease is
 (1) Dengue (2) Polio myelitis (3) Tuberculosis (4) Chicken pox.
 Ans. (3)
 Sol. Tuberculosis is a bacterial disease.
35. Honeybee culture is known as
 (1) Silviculture (2) Apiculture (3) Sericulture (4) Pisciculture.
 Ans. (2)
 Sol. Honeybee culture is known as Apiculture.
36. Disease caused by deficiency of Vitamin-D is
 (1) Night blindness (2) Beri-beri (3) Scurvy (4) Rickets.
 Ans. (4)
 Sol. Rickets is caused by deficiency of Vitamin-D.
37. Universal donor blood group is
 (1) A (2) O (3) AB (4) B
 Ans. (2)
 Sol. O is universal donor blood group.
38. Skeletal muscles are
 (1) striated and voluntary (2) unstriated and voluntary
 (3) striated and involuntary (4) unstriated and involuntary
 Ans. (1)
 Sol. Skeletal muscles are striated and voluntary muscles.
39. Water vascular system is found in
 (1) Cnidaria (2) Echinodermata (3) Mollusca (4) Annelida
 Ans. (2)
 Sol. Water vascular system is found in Echinodermata.
40. Which of the following is not a secondary reproductive organ ?
 (1) Fallopian tube (2) Uterus (3) Ovary (4) Vagina
 Ans. (3)
 Sol. Ovary is primary reproductive organ.
41. Which of the following is not an irrational number ?
 (1) $2 + \sqrt{5}$ (2) $\sqrt{2}$ (3) $\frac{7}{\sqrt{5}}$ (4) $\frac{2\sqrt{11}}{7\sqrt{11}}$
 Ans. (4)
 Sol. $\frac{2\sqrt{11}}{7\sqrt{11}} \Rightarrow \frac{2}{7} = \text{Rational number.}$
 So, Answer is Option (4)
42. If a polynomial $x^4 - 4x^2 + x^3 + 2x + 1$ is divided by $x - 1$, then remainder will be
 (1) 0 (2) 1 (3) 9 (4) -1
 Ans. (2)
 Sol. $P(x) = x^4 - 4x^2 + x^3 + 2x + 1$
 Divided by $(x - 1)$
 Remainder = $P(1) = 1 - 4 + 1 + 2 + 1 = 1$
 So, Answer is Option (2)

43. The sum of the digits of a two-digit number is 14. If 18 is subtracted from the number, digits are reversed. Find the number.

- (1) 86 (2) 77 (3) 68 (4) 76

Ans. (1)

Sol. Let the unit digit be x .

ten's digit = $14 - x$.

$$\text{Number} = 10(14 - x) + x$$

$$\text{So, } 10(14 - x) + x - 18 = 10x + (14 - x)$$

$$\Rightarrow 140 - 9x - 18 = 9x + 14.$$

$$\Rightarrow 140 - 14 - 18 = 18x$$

$$\Rightarrow 126 - 18 = 18x$$

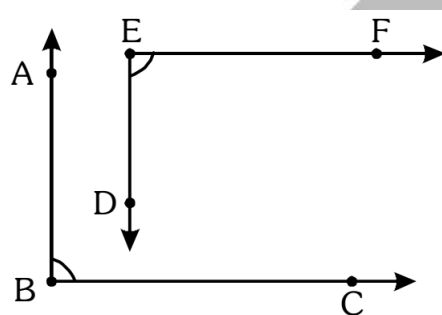
$$\Rightarrow x = 7 - 1 = 6$$

$$\therefore x = 6$$

$$14 - x = 8$$

So, Number = 86, Answer is Option (1)

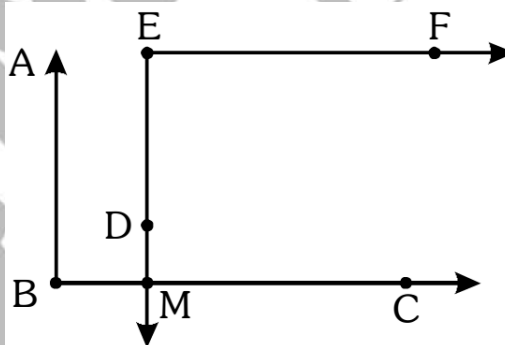
44. In the given figure, $AB \parallel ED$ and $BC \parallel EF$, then the value of $\angle ABC + \angle DEF$ is



- (1) 90° (2) 180° (3) 120° (4) 360°

Ans. (2)

Sol. $\angle ABC = \angle EMC$



(Corresponding angles)

$$\angle DEF + \angle EMC = 180^\circ$$

$$\therefore \angle DEF + \angle ABC = 180^\circ$$

45. How many cubic centimetres make 100 kilolitre?

- (1) 10^{10} (2) 10^5 (3) 10^8 (4) 10^6

Ans. (3)

Sol. $100 \text{ kl} = 100 \times 1000 \times 1000 \text{ cm}^3 = 10^8 \text{ cm}^3$

46. 5th term of an A.P. is 10 more than its 3rd term. What is the difference of its 9th and 6th terms?
 (1) 15 (2) 3 (3) 6 (4) 10

Ans. (1)

Sol. Let an A.P. whose first term is 'a', common difference 'd'

$$\begin{aligned} T_5 &= T_3 + 10 \\ a + 4d &= a + 2d + 10 \\ 2d &= 10 \\ d &= 5 \end{aligned}$$

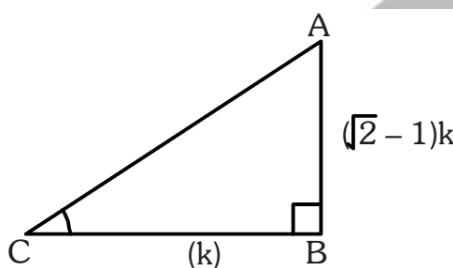
$$T_9 - T_6 = (a + 8d) - (a + 5d) = 15$$

47. If $\tan A = \sqrt{2} - 1$ where A is an acute angle then the value of $\sin A \cdot \cos A$ will be

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

Ans. (3)

Sol. $\tan A = \sqrt{2} - 1$



$$\begin{aligned} AC &= \sqrt{((\sqrt{2} - 1)K)^2 + (K)^2} \\ &= \sqrt{4 - 2\sqrt{2}} K \end{aligned}$$

$$\sin A \cos A = \frac{\sqrt{2} - 1}{\sqrt{4 - 2\sqrt{2}}} \cdot \frac{1}{\sqrt{4 - 2\sqrt{2}}} = \frac{1}{2\sqrt{2}}$$

48. The multiplication of all prime numbers between 1 and 10 is

- (1) 105 (2) 945 (3) 210 (4) 1890.

Ans. (3)

Sol. $2 \times 3 \times 5 \times 7 \Rightarrow 210$

49. If the roots of $(b - c)x^2 + (c - a)x + (a - b) = 0$ are real and equal, then which of the following is true?

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

Ans. (1)

Sol. $(b - c)x^2 + (c - a)x + (a - b) = 0$

As sum of the coefficient zero.

So, one of the root is 1.

So, other root must be 1 as roots are equal.

$$\text{So, } 1 \times 1 = \frac{a - b}{b - c}$$

$$\Rightarrow b - c = a - b$$

$$\Rightarrow 2b = a + c$$

50. For which value of k, a pair of equations $x + y - 4 = 0$, $2x + ky - 3 = 0$ has no solution?

- (1) 0 (2) 2 (3) 6 (4) 8

Ans. (2)

Sol. For no solution, $x + y - 4$, $2x + ky - 3 = 0$

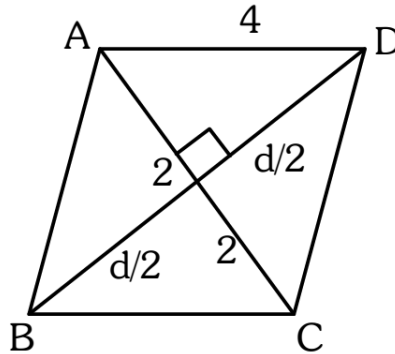
$$\frac{a_1}{a_2} = \frac{b_1}{b_2} \neq \frac{c_1}{c_2} \qquad \frac{1}{2} = \frac{1}{k} \neq \frac{4}{3}$$

51. The length of the side of a rhombus is 4 cm. If one of the diagonals is equal to the side of rhombus, then the length of other diagonal in cm will be

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

Ans. (4)

Sol. Let other diagonal be d



$$\text{So, } (2)^2 + \left(\frac{d}{2}\right)^2 = (4)^2$$

$$= \frac{d^2}{4} = 16 - 4 = 12$$

$$d^2 = 48$$

$$d = 4\sqrt{3}$$

52. The mean of first seventeen whole numbers is

- (1) 8 (2) 7.5 (3) 8.5 (4) 18

Ans. (1)

Sol. Mean of 1st seventeen whole number

$$x = \frac{0+1+2+\dots+16}{17}$$

$$= \frac{16 \times 17}{17} = 8$$

53. A cube of edge 1 cm is cut from a corner of a solid cube of edge 5 cm. What is the total surface area of the solid remained?

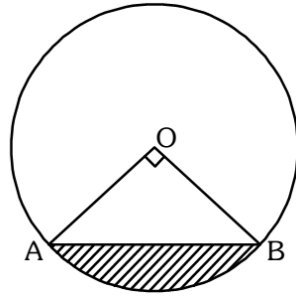
- (1) 150 cm^2 (2) 149 cm^2 (3) 151 cm^2 (4) 147 cm^2

Ans. (1)

Sol. Total surface area of the remaining solid is

$$6 \times 5^2 - 3 \times 1^2 + 3 \times 1^2 = 150$$

54. In the given figure, chord AB subtends an angle 90° at centre O of the circle having radius 4 cm. Area of the shaded region will be



- (1) $(4\pi - 2) \text{ cm}^2$ (2) $4(\pi - 2) \text{ cm}^2$ (3) $(\pi - 8) \text{ cm}^2$ (4) $(\pi - 2) \text{ cm}^2$

Ans. (2)

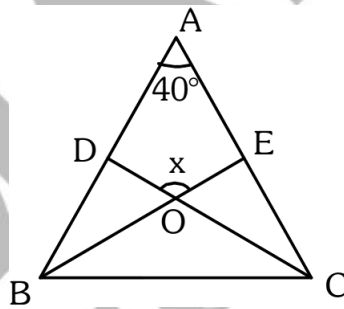
Sol. Area of shaded region

$$= \frac{1}{4} \pi (4)^2 - \frac{1}{2} 4 \times 4 \times \sin 90^\circ$$

$$= \frac{1}{4} (\pi \times 16) - 8$$

$$= 4\pi - 8 = 4(\pi - 2)$$

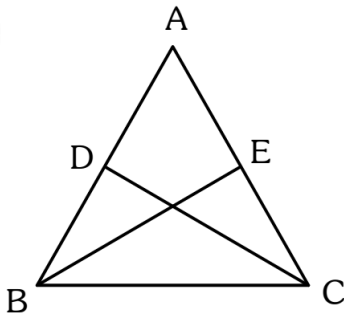
55. In the given figure, $AB = AC$, $\angle BAC = 40^\circ$, BE and CD are angle bisectors of $\angle B$ and $\angle C$ respectively. If $\angle DOE = x$, the value of x is



- (1) 140° (2) 70° (3) 110° (4) 40°

Ans. (3)

Sol. Given $AB = AC$



$$\Rightarrow \angle D = \angle C = 70^\circ (\because \angle BAC = 40^\circ)$$

$$\Rightarrow \angle DOE = \angle BOC = 90 + \frac{A}{2}$$

$$= 90 + 20$$

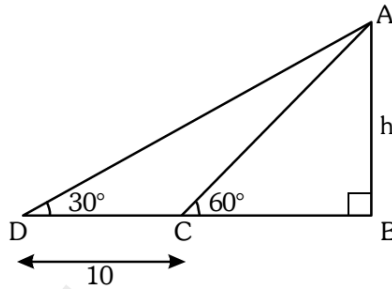
$$= 110^\circ$$

56. The shadow of a tower, when the angle of elevation of the sun is 30° is found to be 10 metre longer than when it was 60° . The height of the tower will be

- (1) $5\sqrt{3}m$ (2) $5(\sqrt{3}-1)m$ (3) $5(\sqrt{3}+1)m$ (4) $3\sqrt{5}m$

Ans. (1)

Sol. Let the height of tower AB be h



$$\therefore BC = \frac{h}{\sqrt{3}}$$

$$BD = h\sqrt{3}$$

$$\text{given} = h\sqrt{3} - \frac{h}{\sqrt{3}} = 10$$

$$= \frac{3h-4}{\sqrt{3}} = 10$$

$$\Rightarrow 2h = 10\sqrt{3}$$

$$\Rightarrow h = 5\sqrt{3}$$

57. A dice is thrown once. If the probability of getting a number less than 4 is x and the probability of getting a number greater than 4 is y, then x - y is

- (1) $\frac{5}{6}$ (2) $\frac{1}{6}$ (3) $\frac{2}{3}$ (4) $\frac{1}{3}$

Ans. (2)

Sol. A dice is rolled once

$$\therefore \text{Probability of getting number less than 4 is } \frac{3}{6} = \frac{1}{2}$$

$$\text{Probability of getting number greater than 4 is } \frac{1}{3}$$

$$\therefore \frac{1}{2} - \frac{1}{3} \Rightarrow \frac{1}{6}$$

58. The sum of distances from x-axis and y-axis measured from the point (3, 5) will be

- (1) -1 (2) 0 (3) 2 (4) 8

Ans. (4)

Sol. Distance from x axis is = 5

Distance from y axis is = 3

$$\therefore \text{Sum} = 5 + 3 = 8$$

59. If $x^2 + 4y^2 + 9z^2 - 4xy - 12yz + 6xz = 0$,

- (1) $x = 2y - 3z$ (2) $x = y - 3z$ (3) $2x = y - 3z$ (4) $x = 3y - 2z$.

Ans. (1)

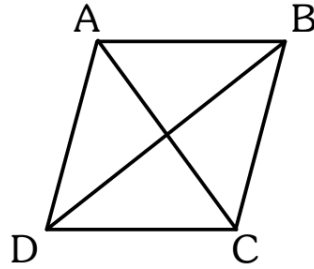
Sol. $x^2 + 4y^2 + 9z^2 - 4xy - 12yz + 6xz = 0$ $(x - 2y + 3z)^2 = 0$

$$\Rightarrow x - 2y + 3z = 0 \quad \Rightarrow x = 2y - 3z$$

60. Which of the following statements is false for the quadrilateral ABCD?
 (1) $AB + BC + CD + DA > AC$ (2) $AB + BC + CD + DA > AB + AC$
 (3) $AB + BC + CD + DA > AC + BD$ (4) $AB + BC + CD + DA < 2AC$

Ans. (4)

Sol. In $\triangle ABC$,
 $AB + BC > AC$ -----(i)
 & In $\triangle ADC$,
 $AD + CD > AC$ -----(ii)
 Add (i) & (ii), we get
 $\therefore AB + BC + CD + DA > 2AC$



61. Match **List-I** with **List-II** and select the correct answer by choosing from the given

List - I	List-II
(1) Magadha	(i) Mathura
(2) Kashi	(ii) Varanasi
(3) Surasena	(iii) Taxila
(4) Gandhara	(iv) Rajgriha

Code:

A	B	C	D
(1) (iv)	(iii)	(ii)	(i)
(2) (i)	(ii)	(iii)	(iv)
(3) (iv)	(ii)	(i)	(iii)
(4) (ii)	(iii)	(iv)	(i)

Ans. (3)

Sol. Only the given option matches correctly.

62. In which of the following forts was the coronation of Chhatrajpati Shivaji held?
 (1) Raygarh Fort (2) Kumbhalgarh Fort (3) Pune Fort (4) Surat Fort

Ans. (1)

Sol. The coronation of Chhatrajpati Shivaji held in Raygarh Fort.

63. The founder of 'Abhinav Bharat' was
 (1) Chandrashekhar Azad (2) Vasudev Hari Chapekar
 (3) Mahatma Gandhi (4) Vinayak Damodar Savarkar

Ans. (4)

Sol. The founder of 'Abhinav Bharat' was Vinayak Damodar Savarkar.

64. Who discovered the Water Frame?
 (1) Henry Cort (2) Richard Archrite (3) James Bridali (4) Jethrotal

Ans. (2)

Sol. The Water Frame discovered by Richard Archrite.

65. When was the Quit India Movement proposal passed?
 (1) 8th August, 1942 (2) 8th August, 1941 (3) 8th August, 1940 (4) 15th August, 1942

Ans. (1)

Sol. The Quit India Movement proposal passed on 8th August, 1942.

66. The state of India, where the Kalibanga is situated, is
 (1) Punjab (2) Rajasthan (3) Gujarat (4) Jammu & Kashmir

Ans. (2)

Sol. The state of India, where the Kalibanga is situated, in Rajasthan.

67. Triratna is related to
 (1) Buddhist philosophy (2) Vedic philosophy
 (3) Islamic philosophy (4) Jain philosophy
- Ans. (4)
- Sol. Triratna is related to Jain Philosophy.
68. What is the modern name of Champa?
 (1) Malaysia (2) Thailand (3) Vietnam (4) Indonesia
- Ans. (3)
- Sol. Champa is the old name of Vietnam.
69. Consider the following points:
 (i) Raja Rammohan Roy established Vedanta College in Calcutta
 (ii) Swami Vivekananda wrote a book named Satyarth Prakash
 Choose the correct answer from the codes given below:
 (1) Both (i) and (ii) are correct (2) Only (i) is correct
 (3) Only (ii) is correct (4) Both (i) and (ii) are correct
- Ans. (2)
- Sol. Swami Dayanand wrote Satyarth Prakash.
70. Who was the king of Russia at the time of the Russian revolution of 1917?
 (1) Czar Nicholas First (2) Louis 14th
 (3) Czar Nicholas Second (4) Louis 16th
- Ans. (3)
- Sol. Czar Nicholas II ruled Russia during Russian Revolution of 1917.
71. Who was the publisher of Hindu Patriot?
 (1) Bal Gangadhar Tilak (2) Dayhanand Saraswati
 (3) Lala Lajpat Rai (4) Harishchandra Mukherjee
- Ans. (4)
- Sol. Harishchandra Mukherjee published the Hindu Patriot.
72. Which one of the following rivers does not flow on the eastern coastal plain?
 (1) Krishna (2) Godavari (3) Narmada (4) Kaveri
- Ans. (3)
- Sol. Narmada flows through western coastal plain.
73. The plateau between Bhainsroargarh and Bijauliya in Rajasthan is known as
 (1) Bhorat (2) Uparmaal (3) Malwa (4) Royalseema
- Ans. (2)
- Sol. Uparmaal plateau lies between Bhainsrodgarh and Bijoliya.
74. Which one of the following is not a Lagoon lake?
 (1) Chilika (2) Pulicat (3) Kolleru (4) Dal
- Ans. (4)
- Sol. Dal lake is not a lagoon lake.
75. The duration of summer season according to Indian Meteorological Department is
 (1) mid-September to mid-December (2) December to February
 (3) March to mid-June (4) mid-June to mid-September
- Ans. (3)
- Sol. Duration of summer season is from March to Mid-June.
76. In which district of Rajasthan is Amrita Devi Black Deer Sanctuary developed?
 (1) Jodhpur (2) Bikaner (3) Barmer (4) Ganganagar
- Ans. (1)
- Sol. Amrita Devi Black deer sanctuary is in Jodhpur.
77. The joint project of Gujarat, Madhya Pradesh and Rajasthan states is
 (1) Bhakhra Nangal Project (2) Mahi Bajaj Sagar Project
 (3) Chambal Valley Project (4) Sardar Sarovar Project
- Ans. (4)
- Sol. Sardar Sarovar Project is the joint project of Rajasthan-Gujarat-Madhya Pradesh.

78. Match List-I with List-II and select the correct answer using codes given below:

List - I (District)	List-II (Lake)
(1) Ajmer	(i) Sardar Samand
(2) Tonk	(ii) Ana Sagar
(3) Pali	(iii) Navalakha
(4) Bundi	(iv) Tordi Sagar

Code:

A	B	C	D
(1) (iii)	(ii)	(iv)	(i)
(2) (ii)	(iv)	(i)	(iii)
(3) (i)	(iii)	(ii)	(iv)
(4) (iv)	(i)	(iii)	(ii)

Ans. (2)

Sol. Only the given option matches correctly.

79. The percentage of iron content in magnetite iron-ore is

- (1) 40 - 50% (2) 50 - 60% (3) 60 - 70% (4) 70 - 80%

Ans. (3)

Sol. Magnetite contains 60%-70% iron ore.

80. Which one of the following is cement city of Rajasthan ?

- (1) Chittorgarh (2) Bundi (3) Nimbahera (4) Nagaur

Ans. (1)

Sol. Chittorgarh is the cement city of Rajasthan.

81. The district having lowest population growth rate in Rajasthan during 2001-2011 is

- (1) Nagaur (2) Bikaner (3) Bhilwara (4) Ganganagar

Ans. (4)

Sol. Ganganagar has the lowest population growth in Rajasthan.

82. 'Uni Gauge Project' by Indian Railway was started in

- (1) 1982 (2) 1992 (3) 2002 (4) 2012

Ans. (2)

Sol. Uni-gauge project was started in the early 90s

83. In which country is direct democracy found ?

- (1) Italy (2) Japan (3) Switzerland (4) India

Ans. (3)

Sol. Switzerland is the example of Direct Democracy.

84. Who has the right to promulgate an ordinance when the Parliament is not in session ?

- (1) Supreme Court (2) President (3) Prime Minister (4) Lok Sabha Speaker

Ans. (2)

Sol. President has the right to promulgate the ordinance when parliament is not in session.

85. From whose pleasure does the governor hold office ?

- (1) Prime Minister (2) Chief Minister (3) President (4) Vice-President

Ans. (3)

Sol. Governor holds office at the pleasure of Chief Minister.

86. What is the maximum age of retirement for judges of Supreme Court ?

- (1) 62 years (2) 65 years (3) 60 years (4) 70 years

Ans. (2)

Sol. Supreme Court judges retire at the age of 65 years.

87. The term of the President of India is

- (1) 4 years (2) 5 years (3) 3 years (4) 3 years

Ans. (2)

Sol. The term of President of India is five years.

88. On which day was the Constitution of India adopted ?
 (1) 15th August, 1947 (2) 9th December, 1946
 (3) 26th January, 1950 (4) 26th November, 1949

Ans. (4)

Sol. Constitution was adopted on 26 November, 1949.

89. Forced labour is prohibited in which Fundamental Right of India ?
 (1) Right to equality (2) Right to freedom
 (3) Right against Exploitation (4) Right to Freedom of Religion

Ans. (3)

Sol. Forced labour is banned under Right against Exploitation.

90. By which constitutional amendment Fundamental Duties are added in the Constitution of India ?
 (1) 42nd (2) 40th (3) 43rd (4) 45th

Ans. (1)

Sol. Fundamental Duties were included in 42nd amendment.

91. Where is the only Cantonment Board established in Rajasthan at present ?
 (1) Nasirabad (2) Jaipur (3) Chittorgarh (4) Jodhpur

Ans. (1)

Sol. Cantonment Board is present in Nasirabad in Rajasthan.

92. Panchsheel is based on which philosophy ?
 (1) Buddhist philosophy (2) Jain philosophy
 (3) Islamic philosophy (4) Hindu philosophy

Ans. (1)

Sol. Panchsheel is based on Buddhist Philosophy.

93. Match List-I with List-II and choose the correct code from the given code :

List-I

- (1) Nagar Nigam
 (2) Zilla Parishad
 (3) Panchayat Samiti
 (4) Gram Panchayat

List-II

- (i) Zilla Pramukh
 (ii) Pradhan
 (iii) Sarpanch
 (iv) Mayor (Mahapoura)

Code :

A	B	C	D
(1) (i)	(ii)	(iii)	(iv)
(2) (iii)	(i)	(ii)	(iv)
(3) (iv)	(iii)	(ii)	(i)
(4) (iv)	(i)	(ii)	(iii)

Ans. (4)

Sol. Only the given option matches correctly.

94. The nation of socialist economy is
 (1) Japan (2) China (3) France (4) United States of America

Ans. (2)

Sol. China is the socialist economy.

95. The Kharif crop is
 (1) Wheat (2) Barley (3) Maize (4) Gram

Ans. (3)

Sol. Maize is a Kharif crop.

96. The function of commercial banks is
 (1) Issue of currency (2) Credit control
 (3) Lender of last resort (4) Acceptance of people's deposits

Ans. (4)

Sol. The function of the commercial bank is to accept the people's deposits.

97. The formula of measuring per capita income is

$$(1) \text{ Per capita income} = \frac{\text{National income}}{\text{Population}}$$

$$(2) \text{ Per capita income} = \frac{\text{Population}}{\text{National income}}$$

$$(3) \text{ Per capita income} = \frac{\text{Total consumption}}{\text{Population}}$$

$$(4) \text{ Per capita income} = \frac{\text{Population}}{\text{Total consumption}}$$

Ans. (1)

Sol. Per Capita Income is calculated by dividing total income by total population.

98. The characteristic of Indian economy is

- (1) Equality of income (2) lack of poverty
(3) Lack of unemployment (4) Low per capita income

Ans. (4)

Sol. Low per capita income is the characteristic of Indian economy.

99. In India the first effort to measure poverty was done by

- (1) Dadabhai Naoroji (2) D.T. Lakdawala
(3) Prof. Robbins (4) Prof. Keynes

Ans. (1)

Sol. Dada Bhai Narorji was the first person to put effort to measure poverty in India.

100. In Indian the Consumer Day is celebrated on

- (1) 2nd Ocotober (2) 15th August (3) 24th December (4) 26th January

Ans. (3)

Sol. 24th December is celebrated as National Consumer Day in India.

