

Date: 06/11/2016

Max. Marks: 100

SOLUTIONS

Time allowed: 90 mins

1. The sum of squares of two successive natural numbers is 145. The numbers will be -
 (A) 6, 7 (B) 7, 8 (C) 8, 9 (D) 9, 10

Ans. (C)

Sol. Let the successive natural numbers are x and $x + 1$.

$$x^2 + (x + 1)^2 = 145$$

$$x^2 + x^2 + 2x + 1 = 145$$

$$2x^2 + 2x - 144 = 0$$

$$x^2 + x - 72 = 0$$

$$x^2 + 9x - 8x - 72 = 0$$

$$x(x + 9) - 8(x + 9) = 0$$

$$(x + 9)(x - 8) = 0$$

$$x + 9 = 0, \quad x - 8 = 0$$

$$x = -9, \quad x = 8$$

So $x = 8$

$$x + 1 = 9$$

2. $22\frac{1}{2}$ has how many $\frac{1}{4}$?
 (A) 22 (B) 44 (C) 45 (D) 90

Ans. (D)

Sol.
$$\frac{22\frac{1}{2}}{\frac{1}{4}} = \frac{\frac{45}{2}}{\frac{1}{4}}$$

$$= \frac{45}{2} \times \frac{4}{1} = 90$$

3. Two coins are tossed simultaneously. What is the probability of having at least one head ?
 (A) $\frac{1}{4}$ (B) $\frac{2}{4}$ (C) $\frac{3}{4}$ (D) $\frac{4}{4}$

Ans. (C)

Sol. Number of possibilities \rightarrow HH, TT, HT, TH = 4

Favourable events = HH, HT, TH = 3

$$\text{Probability} = \frac{3}{4}$$

4. What is the correct relation in the given data ?

2, 3, 0, -1, 1, 5, 6, 4, 5, 8, 11

(A) Mean = Median (B) Mean = 5 (C) Median = Mode (D) Median = Mean + Mode

Ans. (A)

Sol. -1, 0, 1, 2, 3, 4, 5, 5, 6, 8, 11

$$\text{Mean} = \frac{-1+0+1+2+3+4+5+5+6+8+11}{11}$$

$$= \frac{44}{11} = 4$$

$$\text{Median} = \left(\frac{n+1}{2} \right)^{\text{th}} \text{ observation}$$

$$= \left(\frac{11+1}{2} \right)^{\text{th}} \text{ observation}$$

$$= 6^{\text{th}} \text{ observation}$$

$$\text{Median} = 4$$

$$\text{Mode} = 5$$

$$\text{Mean} = \text{Median}$$

5. What is the distance between the points (3, -6) and (-2, 6)

(A) 12 unit (B) 13 unit (C) 14 unit (D) 15 unit

Ans. (B)

Sol. A(3, -6) B(-2, 6)

$$AB = \sqrt{(-2-3)^2 + (6-(-6))^2}$$

$$= \sqrt{(-5)^2 + (12)^2}$$

$$= \sqrt{25+144}$$

$$= \sqrt{169}$$

$$= 13$$

\therefore distance between points = 13

6. If the sum of a progression 17 + 15 + 13 + 11 + ... is 72, The number of terms in the progression will be -

(A) 6 (B) 7 (C) 8 (D) 9

Ans. (A)

Sol. 17 + 15 + 13 + 11 +

This series is in arithmetic progression with first term (a) = 17

common difference (d) = -2

let number of terms = n

$$\therefore S_n = \frac{n}{2} [2a + (n-1)d]$$

$$72 = \frac{n}{2} [2(17) + (n-1)(-2)]$$

$$144 = n[34 - 2n + 2]$$

$$144 = 36n - 2n^2$$

$$2n^2 - 36n + 144 = 0$$

$$n^2 - 12n - 6n + 72 = 0$$

$$n(n-12) - 6(n-12) = 0$$

$$n = 12, n = 6$$

7. If $\tan \theta + \cot \theta = 3$ then $\tan^2 \theta + \cot^2 \theta = ?$
 (A) 7 (B) 9 (C) 11 (D) 27

Ans. (A)

Sol. $\tan \theta + \cot \theta = 3$
 $\tan^2 \theta + \cot^2 \theta = (\tan \theta + \cot \theta)^2 - 2 \tan \theta \cdot \cot \theta$
 $= (3)^2 - 2 \tan \theta \cdot \frac{1}{\tan \theta}$
 $= 9 - 2$
 $= 7$

8. If $\sin \theta - 1 = 0$, then θ will be -
 (A) 0° (B) 90° (C) 30° (D) 60°

Ans. (B)

Sol. $\sin \theta - 1 = 0$
 $\sin \theta = 1$
 $\sin \theta = \sin 90^\circ$
 $\therefore \theta = 90^\circ$

9. A wheel rotates 100 times to cover a distance of 88 meters. What is the diameter?
 (A) 7 cm (B) 14 cm (C) 22 cm (D) 10 cm

Ans. (B)

Sol. $100 \times 2\pi r = 88$
 $100 \times 2 \times \frac{22}{7} \times r = 88$
 $r = \frac{88 \times 7}{100 \times 2 \times 22}$
 $r = \frac{14}{100}$
 $r = 0.14 \text{ m}$
 $= 14 \text{ cm}$

10. Three cubes of edges of 3 cm, 4 cm and 5 cm respectively are melted to form a bigger cube. The edge of the bigger cube will be -
 (A) 12 cm (B) 8 cm (C) 7 cm (D) 6 cm

Ans. (D)

Sol. $3^3 + 4^3 + 5^3 = a^3$
 $\Rightarrow 216 = a^3$
 $a = 6 \text{ cm}$

11. H.C.F. and L.C.M. of two polynomials are x and $(x^3 - 9x)$ respectively. If one polynomial is $(x^2 + 3x)$, then second will be -
 (A) $(x^2 + 3x)$ (B) $(x^2 - 9x)$ (C) $(x^2 + 9x)$ (D) $(x^2 - 3x)$

Ans. (D)

Sol. $a \times b = \text{HCF}(a, b) \times \text{LCM}(a, b)$
 $(x^2 + 3x) \times b = (x^3 - 9x)(x)$
 $b = \frac{(x^3 - 9x)x}{x^2 + 3x} = \frac{(x^2 - 9)x^2}{(x + 3)(x)}$
 $b = \frac{(x - 3)(x + 3)x^2}{(x + 3)x}$
 $b = x(x - 3) = x^2 - 3x$

12. There are 20 students in a class. The mean value of their scores is 135. On rechecking, two mistakes were found. After correction, the marks of one student was increased by 35 and the marks of the other was decreased by 15. What is the mean value of the marks after correction ?

- (A) 135.5 (B) 136 (C) 155 (D) 134.5

Ans. (B)

Sol. $\bar{x} = 135$

$$\frac{(20 \times 135) + 35 - 15}{20} = \frac{2700 + 20}{20}$$

$$= \frac{2720}{20} = 136$$

13. Some people complete a work in 20 days. If the number of people is doubled and work is halved, in how many days will they complete it ?

- (A) 5 (B) 10 (C) 20 (D) 40

Ans. (A)

Sol. $w = kd_1 n_1$

$$\frac{w_1}{d_1 n_1} = \frac{w_2}{d_2 n_2}$$

$$\frac{y}{20x} = \frac{y}{2d_2 2x}$$

$$4d_2 = 20$$

$$d_2 = 5$$

14. If $3\sqrt{3} \times 3^3 \div 3^{-3/2} = 3^{a+2}$, then $a = ?$

- (A) 2 (B) 1/2 (C) 4 (D) 0

Ans. (C)

Sol. $\frac{3\sqrt{3} \times 3^3}{3^{-3/2}} = 3^{a+2}$

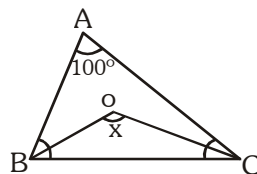
$$3^{3/2} \cdot 3^3 \cdot 3^{3/2} = 3^{a+2}$$

$$3^6 = 3^{a+2}$$

$$6 = a + 2$$

$$a = 4$$

15. In the given figure, the angle bisector of $\angle B$ and $\angle C$ are BO and CO respectively. What is the value of x .



- (A) 120° (B) 130° (C) 140° (D) 150°

Ans. (C)

Sol. In $\triangle ABC$

$$\angle 1 + \angle 2 + 100^\circ = 180^\circ$$

$$\angle 1 + \angle 2 = 80^\circ \quad \dots(1)$$

In $\triangle BOC$

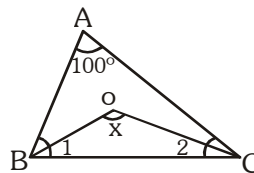
$$\frac{\angle 1}{2} + \frac{\angle 2}{2} + \angle x = 180^\circ$$

$$\angle 1 + \angle 2 + 2\angle x = 360^\circ$$

$$80^\circ + 2\angle x = 360^\circ \text{ (from equation 1)}$$

$$2\angle x = 280^\circ$$

$$\angle x = 140^\circ$$



16. If $3A = 4B = 6C$ then $A : B : C$ be -

- (A) $3 : 4 : 6$ (B) $\frac{1}{4} : \frac{1}{3} : \frac{1}{2}$ (C) $6 : 4 : 3$ (D) $4 : 3 : 2$

Ans. (D)

Sol. $3A = 4B$ $4B = 6C$

$$\frac{A}{B} = \frac{4}{3} \qquad \frac{B}{C} = \frac{6}{4} = \frac{3}{2}$$

$$A : B : C = 4 : 3 : 2$$

17. Number of axis of symmetry in isosceles triangle is -

- (A) 3 (B) 2 (C) 1 (D) 0

Ans. (C)

Sol. One axis of symmetry

18. If $a + b = 2$ and $\frac{1}{a} + \frac{1}{b} = 2$, then $a^3 + b^3$ will be -

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

Ans. (B)

Sol. $a + b = 2$

$$\frac{1}{a} + \frac{1}{b} = 2$$

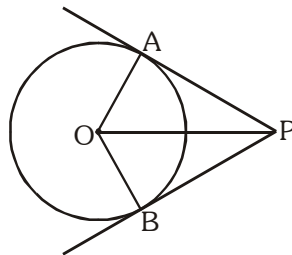
$$\frac{a+b}{ab} = 2$$

$$\frac{2}{ab} = 2$$

$$\therefore ab = 1$$

$$\begin{aligned} \therefore a^3 + b^3 &= (a + b)^3 - 3ab(a + b) \\ &= 8 - 3 \cdot 1 \cdot 2 = 8 - 6 = 2 \end{aligned}$$

19. In the given figure O is the center of circle and PA, PB are its tangents. If $PA = 8$ cm. and $PO = 10$ cm then what is the value of OB ?



- (A) 4 cm (B) 3 cm (C) 5 cm (D) 6 cm

Ans. (D)

Sol. PA is tangent and OA is radius
since tangent to the circle B perpendicular to the radius
 $\therefore PA \perp OA$

In right ΔPAO ,

$$OP^2 = OA^2 + AP^2$$

$$(10)^2 = OA^2 + (8)^2$$

$$100 - 64 = OA^2$$

$$OA^2 = 36$$

$$OA = 6$$

Since $OA = OB =$ radius of circle

$$\therefore \boxed{OB = 6}$$

20. $\frac{8}{40}$ is equivalent to -

- (A) 20% (B) 40% (C) 25% (D) 8%

Ans. (A)

Sol. $\frac{8}{40} = \frac{1}{5}$

$$\frac{1}{5} \times 100\% = 20\%$$

21. Angstrom is the unit used to express

- (A) Length (B) Mass (C) Time (D) None of these

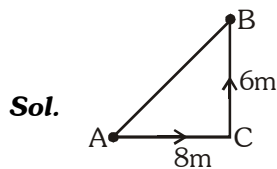
Ans. (A)

Sol. $1\text{A}^\circ = 10^{-10} \text{ m}$

22. A man walks 8 m toward East and then 6 m towards North. His magnitude of displacement will be

- (A) 10 m (B) 14 m (C) 2 m (D) Zero

Ans. (A)



Displacement = length of AB

$$AB^2 = \sqrt{AC^2 + BC^2}$$

$$= \sqrt{8^2 + 6^2} = 10 \text{ m}$$

23. A machine gun fires n bullets per second and the mass of each bullet is m . If the speed of bullets is v , then the force exerted on the machine gun will be

- (A) mng (B) mnv (C) $mnvg$ (D) $\frac{mnv}{g}$

Ans. (B)

Sol. Change in momentum of each bullet = final momentum – initial momentum

$$= mv - 0$$

Total change in momentum = mnv

$$\text{force} = \frac{\Delta p}{\Delta t} = \frac{mnv}{1} = mnv$$

24. A body weighs 60 kg on the earth surface. What would be its weight at the centre of the earth

- (A) 60 kg wt (B) 6 kg wt (C) 60×9.8 kg wt (D) Zero

Ans. (D)

Sol. Weight at the centre of earth is zero

$$g' = g \left(1 - \frac{d}{R} \right)$$

Putting $d = R$

$$g' = 0$$

$$\therefore w = mg' = 0$$

- 25.** When the momentum of a body decreases by 10%, its Kinetic energy decreases
 (A) 20% (B) 40% (C) 36% (D) None of these

Ans. (A)

Sol. $K = \frac{p^2}{2m}$

$$K' = \frac{(9p/10)^2}{2m}$$

$$K' = \frac{81p^2}{200m}$$

$$\Delta K = K' - K$$

$$= \frac{81p^2}{100(2m)} - \frac{p^2}{2m}$$

$$= \frac{p^2}{2m} \left[\frac{81-100}{100} \right]$$

$$= \frac{p^2}{2m} \left[\frac{-19}{100} \right]$$

$$\% \Delta K = \frac{\frac{p^2}{2m} \left(\frac{-19}{100} \right)}{\frac{p^2}{2m}} \times 100$$

$$= 19\% \text{ decrease}$$

$$\approx 20\%$$

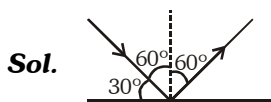
- 26.** A fan produces a feeling of comfort during hot weather because
 (A) Fan supplies cold air (B) Our perspiration evaporates rapidly
 (C) Our body radiates more heat in air (D) Conductivity of air increases

Ans. (B)

Sol. Fan increase the rate of evaporation

- 27.** If a ray of light incident on a plane mirror is such that it makes an angle of 30° with the mirror, then the angle of reflection will be
 (A) 30° (B) 45° (C) 55° (D) 60°

Ans. (D)



$$\text{Angle } \angle i = 90^\circ - 30^\circ = 60^\circ$$

$$\angle i = \angle r \text{ (By 2}^{\text{nd}} \text{ law of reflection)}$$

$$\angle i = \angle r = 60^\circ$$

$$\angle r = 60^\circ$$

28. When we pluck the wire of a sitar, the waves produced in the wire are
 (A) Longitudinal (B) Transverse
 (C) Sometimes longitudinal and sometimes transverse (D) Electromagnetic

Ans. (B)

Sol. Waves produced in a string is transverse in nature

29. The unit of refractive index is
 (A) Metre (B) Degree (C) Dioptre (D) It has no unit

Ans. (D)

Sol. $\mu = \frac{\sin i}{\sin r}$ = unitless and dimensionless, as it is a ratio of two similar quantities.

30. Which of the following colour of light undergoes the maximum deviation while passing through a glass prism?
 (A) Red (B) Blue (C) Violet (D) Green

Ans. (C)

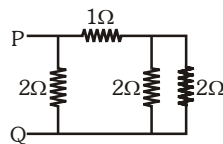
Sol. Refractive index (μ) $\propto \frac{1}{\lambda}$

$$\lambda_{\text{violet}} < \lambda_{\text{red}}$$

$$\therefore \lambda_{\text{violet}} > \lambda_{\text{red}}$$

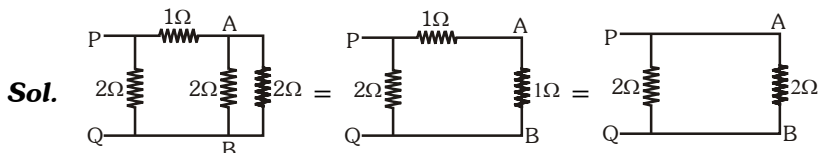
Hence violet will show maximum deviation.

31. The equivalent resistance between P and Q in figure will be



- (A) 7 Ω (B) 2 Ω (C) $\frac{5}{3}$ Ω (D) 1 Ω

Ans. (D)



Req. between A and B = R_1 (let)

$$\frac{1}{R_1} = \frac{1}{2} + \frac{1}{2} = \frac{1}{1}$$

$$R_1 = 1$$

Req between P and Q = R (let)

$$\frac{1}{R} = \frac{1}{2} + \frac{1}{2} = \frac{1}{1}$$

$$R = 1 \Omega$$

32. The strength of a magnetic field of magnet increases when
 (A) The number of magnetic lines of forces passing through a given area increases
 (B) Strength of the pole increase
 (C) Distance between the magnetic pole
 (D) Both (A) and (B)

Ans. (D)

Sol. Magnetic field intensity increase with increase of magnetic field lines and magnetic pole strength.

33. Biogas is a mixture of
(A) $\text{CO} + \text{H}_2 + \text{CH}_4$ (B) $\text{CO}_2 + \text{CH}_4 + \text{H}_2\text{S}$ (C) $\text{CO} + \text{H}_2$ (D) CH_4

Ans. (B)

Sol. Biogas contains mainly CH_4 (methane) and CO_2 and H_2S is present in small amount.

34. On arranging water, sugar and oxygen in increasing order of attraction between their particles. Which of the following will be the correct arrangement.

- (A) Water, Oxygen, Sugar (B) Oxygen, Sugar, Water
(C) Sugar, Oxygen, Water (D) Oxygen, Water, Sugar

Ans. (D)

Sol. Increasing order of forces of attraction between solid, liquid and gas are
Gas < Liquid < Solid

35. Which of the following will show Tyndall effect ?

- (A) Solution of common salt in water (B) Starch solution
(C) Solution of sugar in water (D) Vinegar

Ans. (B)

Sol. Starch solution is a colloid which shows Tyndall effect.

36. The atomic number of Mg is 12. The number of electrons in its M shell will be

- (A) Eight (B) Ten (C) Two (D) Zero

Ans. (C)

Sol. Electronic configuration of magnesium will be 2, 8, 2. Hence number of electrons in M shell will be 2.

37. The atomic masses of two isotopes of chlorine are 35 and 37. The number of neutrons will be

- (A) 18, 20 (B) 20, 18 (C) 17, 18 (D) 18, 17

Ans. (A)

Sol. The two isotopes of chlorine are $^{35}_{17}\text{Cl}$ and $^{37}_{17}\text{Cl}$. The number of neutrons will be = mass number – atomic number
 $35 - 17 = 18$
 $37 - 17 = 20$

38. $\text{Fe}_2\text{O}_3 + 2\text{Al} \rightarrow \text{Al}_2\text{O}_3 + 2\text{Fe}$

The above reaction is of which type

- (A) Combination (B) Dissociation (C) Displacement (D) Double displacement

Ans. (C)

Sol. As aluminium (Al) is more reactive than iron (Fe), it displaces iron from its solution.

39. The aqueous solution of Na_2SO_4 will have a pH value

- (A) 7 (B) less than 7 (C) more than 7 (D) Zero

Ans. (A)

Sol. On hydrolysis of Na_2SO_4 we will get, $\text{Na}_2\text{SO}_4 + \text{H}_2\text{O} \rightarrow \text{NaOH} + \text{H}_2\text{SO}_4$

As NaOH and H_2SO_4 are strong base and strong acid respectively, its salt will be neutral i.e. pH = 7.

40. What is the mass of 12.044×10^{23} number of O_2 molecules?

- (A) 8g (B) 16g (C) 32g (D) 64g

Ans. (D)

Sol. Number of moles = $\frac{12.044 \times 10^{23}}{6.022 \times 10^{23}} = 2$

\therefore Mass of 1 mole of O_2 molecule is 32 gm.

\therefore Mass of 2 moles of O_2 molecules is $2 \times 32 = 64$ gm

- 41.** An element has electronic configuration 2, 8, 4. It belongs to which group and period of the modern periodic table?
 (A) Third group and fourth period (B) Fourth group and third period
 (C) Fourteenth group and third period (D) Fourteenth group and fourth period

Ans. (C)

Sol. Electronic configuration = 2, 8, 4 → 3 shells occupied → third period
 total electrons = 14 → Fourteen group.

- 42.** Which of the following hydrocarbon have a triple bond ?
 (A) C₂H₆ (B) C₃H₄ (C) C₃H₆ (D) C₃H₅

Ans. (B)

Sol. General formula of Alkyne-C_nH_{2n-2}
 If we put n = 3. C₃H₄ has triple bond.

- 43.** Objective of roasting of ore is
 (A) To oxidize it (B) To reduce it
 (C) To remove volatile matter (D) (A) and (C) both

Ans. (D)

Sol. Roasting → To oxidise the carbonate ore in absence of air on heating is called roasting. It also remove the volatile matters.

- 44.** Which of the following has electron bond ?
 (A) O₂ (B) CHCl₃ (C) NaCl (D) CCl₄

Ans. (C)

Sol. NaCl is formed through complete transfer of electrons that's why it has electrovalent bond

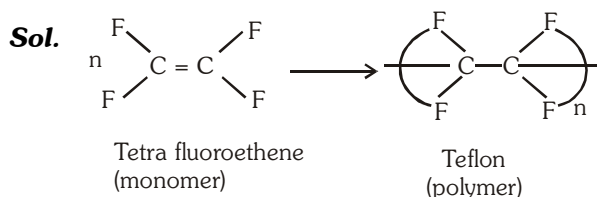
- 45.** The compound obtained by reaction C₂H₆OH with concentrated H₂SO₄, 443 K is
 (A) C₂H₄ (B) CH₃CHO (C) CH₃COOH (D) CH₃COCH₃

Ans. (A)

Sol. C₂H₅-OH $\xrightarrow[\text{conc. H}_2\text{SO}_4]{443 \text{ K}}$ C₂H₄ + H₂O.

- 46.** Teflon is a polymer of which of the following monomer
 (A) Mono fluoro ethene (B) Tetra fluoro ethene (C) Di fluoro ethene (D) Tri fluoro ethene

Ans. (B)



- 47.** Ecosystem comprises both abiotic and biotic component. Biotic component of an ecosystem consists of
 (A) Producers (B) Consumers (C) Decomposers (D) All the above

Ans. (D)

Sol. Producers, Consumers and decomposers all are the biotic components of the ecosystem.

- 48.** In human beings sugar level in blood is controlled by
 (A) Adrenaline (B) Estrogen (C) Insulin (D) Thyroxine

Ans. (C)

Sol. Insulin helps in regulating the blood sugar level in human beings.

49. In whittaker's classification unicellular organisms are grouped under
 (A) Kingdom protista (B) Kingdom Fungi (C) Kingdom Monera (D) Kingdom Plantae

Ans. (A), (C)

Sol. Unicellular organisms are classified in both Monera and protista. Monera are unicellular prokaryote and protista are unicellular eukaryote.

50. Which of the following are simple tissues?
 (A) Parenchyma, Xylem, Collenchyma (B) Parenchyma, Collenchyma, Sclerenchyma
 (C) Parenchyma, Xylem, Sclerenchyma (D) Parenchyma, Xylem, Phloem

Ans. (B)

Sol. Parenchyma, Collenchyma and sclerenchyma are the simple permanent tissue whereas xylem and phloem are the complex permanent tissues.

51. The best way to get rid of non biodegradable waste is
 (A) Dumping (B) Burying (C) Recycling (D) Burning

Ans. (B)

Sol. The best way to get rid of non biodegradable waste is burying.

52. Asha found a plant possess tap root and reticulate venation in leaves. This plant may be
 (A) Monocot (B) Dicot (C) Both (A) and (B) (D) None of above

Ans. (B)

Sol. Plant possessing tap root and reticulate venation in leaves will be classified under dicot.

53. Which of the following plays an important role in nitrogen cycle
 (A) Yeast (B) Nitrobacter (C) Mucor (D) Spirogyra

Ans. (B)

Sol. Nitrobacter is a bacteria which plays an important role in nitrogen cycle.

54. Ginger is a stem and is not a root because
 (A) It stores food material (B) It has nodes and internodes
 (C) It lacks chlorophyll (D) It grows horizontally in the soil

Ans. (B)

Sol. Ginger is a stem as it has nodes and internodes and is not considered as root.

55. Which organ of the body is most affected by excessive intake of alcohol?
 (A) Stomach (B) Lungs (C) Liver (D) Spleen

Ans. (C)

Sol. Liver is mostly affected by excessive intake of alcohol.

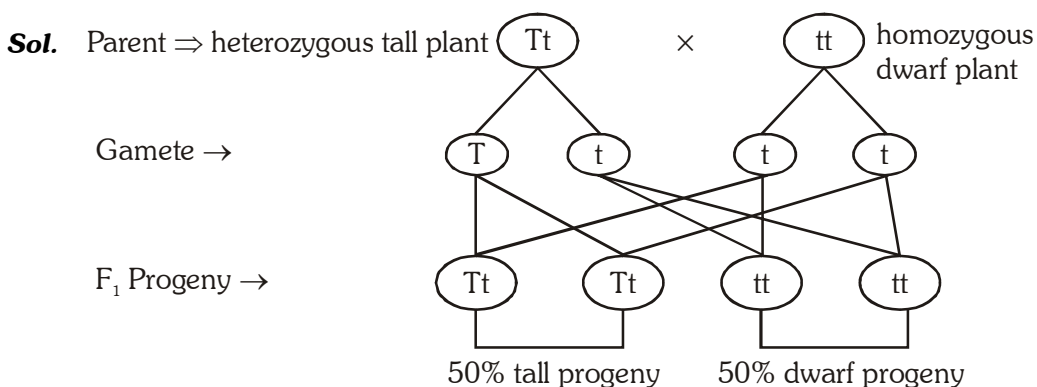
56. In which of the following plant generally root nodules are found?
 (A) Black piper (B) Pea (C) Onion (D) Radish

Ans. (B)

Sol. Pea plant have root nodules in their roots.

57. If a heterozygous tall plant is crossed with a homozygous dwarf plant, the proportion of dwarf progeny will be
 (A) 50% (B) 75% (C) 100% (D) 25%

Ans. (A)



58. Which one of the following does not have valves?

- (A) Auricle (B) Ventricle (C) Artery (D) Vein

Ans. (C)

Sol. Artery does not have valves.

59. Which one of the following is not a viral disease?

- (A) Polio (B) Mumps (C) AIDS (D) Cholera

Ans. (D)

Sol. Cholera is a bacterial disease and polio, Mumps and AIDS are viral diseases.

60. The main function of phloem in plants is the conduction of

- (A) Food (B) Minerals (C) Water (D) All the above

Ans. (A)

Sol. The main function of phloem in plants is the conduction of food.

61. In which subject area was Panini a great scholar?

- (A) Language and Grammar (B) Ayurveda
(C) Astronomy (D) Biology

Ans. (A)

Sol. Panini was a great scholar of language and Grammar.

62. Between whom was the third battle of Panipat fought?

- (A) Hemu and Akbar (B) Humayun and Shershah
(C) Marathas and Ahamdshah Abdali (D) British and Teepu Sultan

Ans. (C)

Sol. The Third Battle of Panipat took place on 14 January 1761, at Panipat, about 60 miles (97 km) north of Delhi between a northern expeditionary force of the Maratha Empire and the invading forces of the King of Afghanistan, Ahmad Shah Abdali

63. By which name was Iraq known in ancient time ?

- (A) Babylon (B) Abyssinia (C) Syria (D) Mesopotamia

Ans. (D)

Sol. These rivers provide Iraq with significant amounts of fertile land. The region between the Tigris and Euphrates rivers, historically known as Mesopotamia, is often referred to as the cradle of civilisation.

64. Who was the first Hindu court poet who accepted Din-e-Ilahi?

- (A) Todar Mal (B) Man Singh (C) Birbal (D) Bhagwan Das

Ans. (C)

Sol. The only Hindu Courtier of Akbar who accepted Din-e-Ilahi was Raja Birbal.

65. Who implemented the doctrine of lapse?

- (A) Lord Dalhousie (B) Lord Vesley (C) Lord Canning (D) Loard Wellesley

Ans. (A)

Sol. Doctrine of Lapse was implemented by Lord Dalhousie

66. When was the battle of plassey fought ?

- (A) 1556 (B) 1755 (C) 1757 (D) 1857

Ans. (C)

Sol. The Battle of Plassey was a decisive victory of the British East India Company over the Nawab of Bengal and his French allies on 23 June 1757

67. When was the United Nations Organisation established?

- (A) 24 October 1945 (B) 02 October 1945 (C) 10 December 1945 (D) 15 August 1945

Ans. (A)

Sol. The United Nations (UN) is an intergovernmental organization to promote international co-operation. A replacement for the ineffective League of Nations, the organization was established on 24 October 1945 after World War II in order to prevent another such conflict.

- 68.** Gandhiji's famous "Dandi March" was related to which movement ?
(A) Quit India movement (B) Khilafat Andolan
(C) Non Co-operation movement (D) Savinay Avagya Andolan

Ans. (D)

Sol. On 5 February, newspapers reported that Gandhi would begin civil disobedience by defying the salt laws. The salt satyagraha would begin on 12 March and end in Dandi with Gandhi breaking the Salt Act on 6 April.

- 69.** Which ruler earned fame for road construction in the medieval period ?
(A) Akbar (B) Shah Jahan (C) Shershah Suri (D) Razia Begum

Ans. (C)

Sol. Sher Shah Suri earned the fame for road construction in the medieval period .

- 70.** Which one of the following groups of countries were known as "Axis Power"?
(A) Germany, Japan and Italy (B) Britian, France and Soviet Union
(C) India, Britian and Italy (D) U.S.A. Britian and France

Ans. (A)

Sol. Axis powers definition-Germany, Italy, and Japan, which were allied before and during World War II.

- 71.** Who was the facist dictator of Italy?
(A) Hitler (B) Napolepn (C) Mussolini (D) Bismark

Ans. (C)

Sol. Benito Mussolini created the Fascist Party in Italy in 1919, eventually making himself dictator prior to World War II. ... In 1919, he created the Fascist Party, eventually making himself dictator and holding all the power in Italy

- 72.** 'Open door Policy' was declared to establish trade relation with which country ?
(A) United State of America (B) Japan
(C) Great Britian (D) China

Ans. (D)

Sol. Open Door policy, statement of principles initiated by the United States in 1899 and 1900 for the protection of equal privileges among countries trading with Chinaand in support of Chinese territorial and administrative integrity.

- 73.** Which is the standard meridian of India ?
(A) 80° East Longitude (B) 81°East Longitude (C) $82\frac{1}{2}$ ° East Longitude (D) $81\frac{1}{2}$ ° East Longitude

Ans. (C)

Sol. The standard meridian of India is 82.5 degrees east of the Greenwich Meridian. This meridian passes through the city of Allahabad. It runs through the center of the country.

- 74.** At the mouth of which river is the Sunderban delta formed?
(A) Godavari (B) Krishana (C) Kaveri (D) Ganga

Ans. (D)

Sol. The Sundarbans is a natural region comprising southern. TheSundarban forest lies in the vast delta on the Bay of Bengal formed by the super confluence of the Ganges, Padma, Brahmaputra and Meghna

- 75.** What is meant by the term "Loo' ?
(A) Cold and dry winds (B) Strong hot and dry winds
(C) Retreating Mansoon (D) The Trade winds

Ans. (B)

Sol. The Loo is a strong, hot and dry summer afternoon wind from the west which blows over the western Indo-Gangetic Plain region of North India and Pakistan.

76. Which continent is divided into almost equal parts by the Tropic of Capricorn ?
(A) Australia (B) Africa (C) Asia (D) South America

Ans. (A)

Sol. The Tropic of Capricorn lies at 23.5° South of the equator and runs through Australia, Chile, southern Brazil (Brazil is the only country that passes through both the equator and a tropic), and northern South Africa.

77. Which of the following is not a tiger reserve in India ?
(A) Sunderban National Park (B) Kaziranga National Park
(C) Sariska Wild life Sanctuary (D) Manas Wild life Sanctuary

Ans. (B)

Sol. Kaziranga is famous for one horned Rhino not for the tigers

78. Which of the following group is grown in Rabi Season?
(A) Rice, Jute, Maize (B) Pulses, Melons, Vegetables
(C) Sugarcane, Tobacco, Tea (D) Wheat, Peas, Mustard

Ans. (D)

Sol. The major rabi crop in India is wheat, followed by barley, mustard, sesame and peas

79. What is the name of the Hill station which is not in Himalayas?
(A) Ooty (B) Darjeeling (C) Shimla (D) Nainital

Ans. (A)

Sol. Udhagamandalam and abbreviated as Udhagai and Ooty is a town and municipality in the Indian state of Tamil Nadu. (In Nilgiris ; not in Himalayas)

80. What is "Jet Stream"?
(A) House boat
(B) Fast blowing air current of the upper Atmosphere
(C) Warm ocean current
(D) Small river

Ans. (B)

Sol. Jet streams are fast flowing, narrow, meandering air currents found in the atmosphere of some planets, including Earth

81. Choose the name of the state which touches the boundary of Chhattisgarh?
(A) Andhra Pradesh (B) Bihar (C) Uttarakhand (D) Telangana

Ans. (A)

Sol. Telangana (after Andhra Pradesh's bifurcation in 2014) in the south, Odisha in the east, Jharkhand in the northeast and Uttar Pradesh in the north

82. Which one of the following cities has emerged as the " Electronic Capital" of India?
(A) Delhi (B) Bengaluru (C) Kolkata (D) Hyderabad

Ans. (B)

Sol. Bangalore is referred to as the Silicon Valley of India. Bangalore in Karnataka is called the electronic capital of India.

83. In which country is the Mount Everest situated?
(A) India (B) Bhutan (C) Nepal (D) China

Ans. (C)

Sol. Mount Everest, also known in Nepal as Sagarmatha and in China as Chomolungma, is Earth's highest mountain. Its peak is 8,848 metres above sea level. Mount Everest is located in the Mahalangur mountain range in Nepal

84. Which soil is the best for production of Jute?

- (A) Red Soil (B) Black Soil (C) Laterite Soil (D) Alluvial Soil

Ans. (D)

Sol. Jute, like other fibers, requires rich soils and thrives on river alluvium, especially where annual floods renew the fertility of the soil. The best quality of jute is obtained from loamy soils, whereas the heaviest yield comes from clayey soils.

The alluvial soils of the lower Ganga valley are the ideal. Jute requires so much moisture that it is usually grown under flood conditions.

85. The Indian constitution is a republican constitution because it has _____?

- (A) an elected Prime Minister (B) a federal form government
(C) a paliamentary democracy (D) an elected President

Ans. (D)

Sol. India is termed as Republic. Became republic on 26 January 1950 with the enactment of constitution and President, the head of the government is elected not a hereditary post.

86. What is the importances of public opinion in a democracy ?

- (A) Political awareness among people (B) Central dictatorship of the ruler
(C) Coordination between legislative and executive (D) All the above

Ans. (A)

Sol. Public Opinion leads to political awareness among the people.

87. Who can call the joint session of the parliament and addresses it?

- (A) The governor (B) President
(C) Prime minister (D) Speaker of Lok Sabha

Ans. (B)

Sol. Legislative powers of the President says President can call the join session of the both the houses of the Parliament and address it.

88. Which effective tool of the parliament controls the council of ministers?

- (A) Calling attention motion (B) Adjournment motion
(C) No confidence motion (D) Asking questions

Ans. (C)

Sol. If the Parliament passes the no confidence motion against council of ministers , they have to resign, Thus it is an effective tool to control the council of ministers.

89. Which of the following is included in the Concurrent list ?

- (A) Trade (B) Education (C) Police (D) Banking

Ans. (B)

Sol. Education is a part of Concurrent list.

90. In which system of elected bodies about the third seats are reserved form women ?

- (A) Panchayat and urban bodies (B) Lok Sabha
(C) Rajya Sabha (D) State Assemblies

Ans. (A)

Sol. In Panchayats and urban bodies one third seats are reserved for women.

91. The voting age was lowered from 21 to 18 years according to which amendment of constitution?

- (A) 52nd (B) 61st (C) 86th (D) 92nd

Ans. (B)

Sol. As per the 61st Constitutional Amendment of India, 1988 the voting age was lowered from 21 to 18.

92. Where is the headquarter of United Nations educational Scientific and Cultural organization located?
(A) Rome (B) Paris (C) Mexico (D) New York

Ans. (B)

Sol. Headquarters of the UNESCO is in Paris.

93. When does the growth rate and death rate remain high ?

- (A) Both the Birth rate and death rate remain high
- (B) The death rate decreases but birth rate remains high
- (C) There is reduction in both
- (D) All of the above

Ans. (B)

Sol. When the death rate decreases, but the Birth rate remains high , it leads to high growth rate of Population.

94. What is meant by division of labour ?

- (A) Specialisation of economic activity
- (B) Production en large scale
- (C) Speicalisation in quality and quantity of production
- (D) Increases is production

Ans. (A)

Sol. Specialisation of economic activity is termed as division of labour

95. What is increased due to the gap between the demand and supply?

- (A) Unemployment (B) Price of goods (C) Mobility of Labour (D) Poverty

Ans. (B)

Sol. The price of goods increases due to the gap between the demand and supply

96. Which type of tax is land revenue in India?

- (A) Direct tax (B) Indirect tax (C) Income tax (D) Custom duty

Ans. (A)

Sol. Land Revenue is a direct tax in India.

97. "Hallmark" is used as a logo for which of the following ?

- (A) Agricultural Products (B) Jewellery (C) Electrical goods (D) Milk Products

Ans. (B)

Sol. Hallmark is used for Jewellery Standards

98. When do we celebrate " Population day" every year ?

- (A) 10th July (B) 11th August (C) 11th January (D) 10th December

Ans. Bonus

Sol. World Population Day is 11 July ; which is not given in the options

99. Who was the first President of the India Planning Commission ?

- (A) Lal Bahadur Shastri (B) Jagjeevan Ram
- (C) Pt. Jawahar Lal Nehru (D) Indira Gandhi

Ans. (C)

Sol. After India achieved Independence, a formal model of planning was adopted, and accordingly the Planning Commission, reporting directly to the Prime Minister of India, was established on 15 March 1950, with Prime Minister Jawaharlal Nehru as the Chairman.

100. Which one of the following is the most appropriate meaning of under employment.

- (A) Workers are not paid for their work
- (B) Workers are working less than what they are capable of doing
- (C) Workers are working in a lazy manner
- (D) Workers do not wnat to work.

Ans. (B)

Sol. When workers are working less than what they are capable of doing is termed as under employment.