Hint & Solutions

Mock Test - Science

1. **(b)** The reaction represents a neutralisation reaction in which base (NaOH) reacts with an acid (HNO_3) to form salt ($NaNO_3$) and water (H_2O).

2. **(c)** Aqueous solution of A is basic while that of B is acidic. Therefore A has pH greater than 7 and B has pH less than 7.

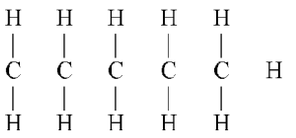
3. **(c)** Zinc is more reactive than tin (zinc is above tin in reactivity series) so it will react with organic acids (present in food) to form poisonous compounds. To avoid this food cans are coated with tin and **not** with zinc.

4. **(a)** $Ca(OH)_2 + CO_2 \rightarrow CaCO_3 + H_2O$

5. **(c)** Conversion of liquid to gas is endothermic process.

6. **(a)** Calcium (Ca) combines with oxygen to form calcium oxide (CaO) which has a high melting point and dissolves in water to form $Ca(OH)_2$.

7. **(c)**



pentane

8. **(b)** The danger signals are red in colour because among all other colours, red colour is scattered the least by smoke or fog. So, it can be easily seen from a distance even in fog or smoky environment.

9. **(a)** A – (iii); B – (iv); C – (i); D – (ii)

10. **(b)** In a rectangular glass slab, the emergent rays are parallel to the direction of the incident ray, as the extent of bending of the ray of light at the opposite parallel faces air-glass and glass-air interface of the rectangular glass slab is equal and opposite.
This is why the ray emerges as parallel to the incident ray.

11. **(c)**

12. **(d)** Wrinkled and green are specific characters because they are different from parents and are recessive.

13. **(d)**

14. **(d)** Decomposers are present at the final level in a food web. They breakdown dead and decaying organic matter (plants and animals) and convert into nutrients in the soil. They naturally increase the decomposition process and therefore used in natural biocomposting.

15. **(d)** Removal of prostate gland will come the sperm to be reacted with the acid urine in the urethra.

16. **(a)** The genotypic ratio will be 1 : 2 : 1. The probabily of having aa is 25% in F_2 generation.

17. **(b)** Both Assertion and Reason are correct but Reason is not a correct explanation of Assertion.
Carbon dioxide and methane are commonly known as greenhouse gases because they are responsible for greenhouse effect.

18. **(b)** The blood of an insect functions differently than the blood of a human. Insect blood, however, does not carry gases and has no haemoglobin which gives red colour to the blood.

19. **(a)** Clouds are generally white as larger particles like dust and water drops scatter light of all colours, almost equally and all the colours reach our eyes equally and combine to form white light.

20. **(a)** The correct IUPAC name for the compound is 2, 4-dimethyl hexane not 3, 5 dimethyl hexane.

21. Transpiration refers to the evaporative loss of water by plant. The importance of transpiration are as follows:
(a) It creates transpiration pull for absorption and transport of water and mineral from xylem of roots to the top of the plant.
(b) It supplies water for photosynthesis.
(c) It transport minerals from soil to all parts of the plant.
(d) It regulates temperature of the leaves. (2 marks)

22. (i) To pass signal from receptors to brain. (½ mark)
(ii) Bony box which protects our brain. (½ mark)
(iii) Bony structure that protects the spinal cord. (½ mark)
(iv) To transmit signal from brain or spinal cord to effector organ. (½ mark)

23. The sexually transmitted disease (STD) are a group of communicable disease that are transmitted mainly by sexual contacts. STDs are also called as Veneral Disease (V.D). STDs are caused by bacteria, viruses, protozoa and fungi. (1 + 1 = 2 marks)

24. (i) Mendel experimented on garden pea plant with selection of seven visible contrasting characters forming laws of inheritance. He selected and crossed homozygous tall pea plant with genotype TT and a homozygous dwarf pea plant with the genotype tt. F_1 generation consists only of tall plants having genotype Tt.
The expressed allele 'T' for tallness is dominant over the unexpressed allele t for dwarfness. Therefore, the trait of tallness is dominant while dwarfness is the recessive trait. Thus, Mendel's experiment showed that traits may be dominant or recessive.
(ii) In Mendel's experiment, different traits were tall and dwarf plant, round and wrinkled seeds. In F_2 (second) generation, some plants were tall with round seeds and others were dwarf with wrinkled seeds. Other combination was dwarf plants having round/wrinkled seed traits, that were independently inherited.
(1 + 1 = 2 marks)

25. Type of mirror used in:
(i) **Headlights of a car :** Concave mirror
Concave mirror is used because light from the bulb placed at the focus of it gets reflected and produces a powerful parallel beam of light to illuminate the road.
(ii) **Solar furnace:** Concave mirror
Cancave mirror has the property to concentrate the sunlight coming from sun along with heat radiation at its focus. As a result, temperature at its focus increases and the substance placed at the focal point gets heated to a high temperature. (1 × 2 = 2 marks)

OR

(i) Convex lens (ii) Convex lens
(iii) Convex lens (iv) Concave lens
(½ × 4 = 2 marks)

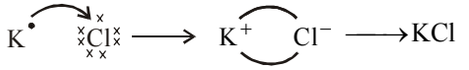
26. (i) In white washing, quick lime reacts with water to form slaked lime. (½ mark)
$CaO + H_2O \longrightarrow Ca(OH)_2 + Heat$ (½ mark)
Quick lime Slaked lime

(ii) Silver bromide, when exposed to light decomposes to silver and bromine. (½ mark)

$$\underset{\text{Silver bromide}}{2AgBr(s)} \xrightarrow{\text{Sunlight}} \underset{\text{Silver}}{2Ag(s)} + \underset{\text{Bromine}}{Br_2(g)} \quad (½ \text{ mark})$$

OR

Covalent bonds are formed by sharing of electrons whereas ionic bonds are formed by transfer of electrons e.g. KCl. In KCl, ionic bond is present.



(1 mark)

In CH_4, covalent bond is present. (1 mark)

27. (i) Scattering of light – Phenomenon of spreading of light (diffused reflection) by minute particles in a medium. (1 mark)

(ii) The sky appears blue because the blue colour of sunlight scatters much more strongly than the red colour by particles in atmosphere/air due to its shorter wavelength. (2 marks)

28. (i) Photo decomposition of silver chloride takes place which results in formation of silver and colour changing to grey. (1 mark)

$$2AgCl \rightarrow \underset{\text{(grey)}}{2Ag} + Cl_2$$

(ii) Copper undergoes oxidation and black coloured copper oxide is formed.

$2Cu + O_2 \rightarrow 2CuO$ (1 mark)

(iii) Zinc is more reactive than copper so it displaces copper from its solution and colour of the solution changes from blue to colourless.

$Zn(s) + CuSO_4(aq.) \rightarrow Cu(s) + ZnSO_4(aq.)$ (1 mark)

29. (i) One end of current carrying solenoid behaves as a magnetic north pole, while the other behaves as the south pole. Like in bar magnet, the field lines emerge from one end and merge into another. So, there is either a convergence at S-pole or a divergence from N-pole of magnetic field lines near the ends of solenoid. (1 mark)

(ii) A current carrying solenoid behaves like a bar magnet. We know that a freely suspended bar magnet aligns itself in the north-south direction. Hence, it rests along north-south direction when suspended freely. (1 mark)

(iii) Fuse of lower rating will blow off immediately (and require frequent replacements). Fuse of higher rating will not break the circuit, even in case of higher load. So, burnt out fuse should be replaced by another fuse of identical rating for electrical safety. (1 mark)

OR

$$P = \frac{V^2}{R} \quad (1 \text{ mark})$$

$$2\times10^3 = \frac{220\times220}{R} \Rightarrow R = \frac{220\times220}{2\times10^3} \quad (1 \text{ mark})$$

$$I = \frac{V}{R} = \frac{220\times2\times10^3}{220\times220} = \frac{100}{11} = 9.09A$$

At this stage, due to very high value of current, oven will be damaged. (1 mark)

30. In a prism the refraction of light takes place at the two slant surfaces. The dispersion of white light occurs at the first surface of prism where its constituent colours are deviated through different angles. At the second surface, these split colours suffer only refraction and they get further separated. But in a rectangular glass block, the refraction of light takes place at the two parallel surfaces. At the first surface, although the white light splits into its constituent colours on refraction, but these split colours on suffering refraction at the second surface emerge out in form of a parallel beam, which give an impression of white light. (3 marks)

31. 1. Fertilization is the process of fusion of sperm with ovum. It is internal in human beings.
2. During copulation (mating or coitus), the sperms are released in the vagina near the lower end of the uterus.
3. Millions of sperms are released in the vagina, and they actively swim with the help of their tails and pass into the uterus.
4. From the uterus , they reach the oviduct (fallopian tube).
5. If there is an egg in the oviduct, it gets fertilised only by one sperm. (If copulation has taken place during ovulatory period i.e., middle of menstrual cycle).
6. When the sperm unites with ovum, zygote is formed.
7. The absence of menstruation indicates fertilisation (after copulation).
8. After fertilisation, the embryonic development of zygote starts in the fallopian tube (pregnancy starts). The embryo reaches the uterus and gets attached to its thickened inner wall. This attachment of the embryo with the uterus is called implantation.
9. After implantation, a special tissue develops between the embryo (foetus) and uterine wall called as placenta. It is richly supplied with blood.
10. Function of placenta : It provides all the basic needs of foetus till birth such as nutrition, respiration, excretion with the help of maternal body.
11. The growth or development of foetus inside the uterus till birth is known as gestation. On completion of gestation, the birth of fully grown and developed foetus taken place. This is known as parturition.
12. The duration of pregnancy, on an average lasts 280 days or 40 weeks from the 1st day of the last menstrual cycle.
13. The average weight of newborn should be 3.5 Kg After 40 weeks of gestation. (3 marks)

32. (i) In a food chain the energy always moves progressively through the various trophic levels and is no longer available to the organisms of the previous trophic level/energy captured by the autotrophs does not go back to the solar input. (1 mark)

(ii) Pesticides are used in agriculture for crop protection. When washed away/down into the soil/water bodies absorbed by plants/producers. (1 mark)

(iii) Upon consumption, they enter into our food chain and being non - biodegradable, these chemicals get progressively accumulated in our body. (1 mark)

33. (i) The bond which is formed by loss and gain of electron is called ionic or electro-valent bond. (½ mark)
(ii) M.P. and B.P. of ionic compounds are high. (½ mark)
(iii) Ionic compounds are soluble in water but not in organic solvents. (1 mark)
(iv) Ionic compounds are good conductors of electricity. (1 mark)

34. (i) To find out the total resistance of the circuit when three resistances are connected in parallel:

Let the three resistances R_1, R_2 and R_3 be connected in parallel across the two ends A and B. This combination is connected to a battery of 'V' volt which supplies a current 'I'. Since these three resistances are across the same points A and B i.e. they have same PD i.e. 'V' volt.

But the current gets divided into I_1, I_2 and I_3 through R_1, R_2 and R_3 respectively.

According to Ohm's law,

$$V = IR \Rightarrow I = \frac{V}{R} \qquad \text{(1 mark)}$$

$$\text{Current } I_1, \text{(flowing through } R_1) = \frac{V}{R_1}$$

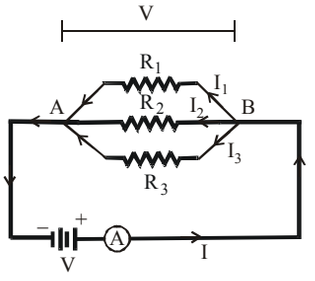
$$\text{Current } I_2, \text{(flowing through } R_2) = \frac{V}{R_2}$$

$$\text{Current } I_3 \text{ (flowing through } R_3) = \frac{V}{R_3}$$

Since, $I = I_1 + I_2 + I_3$

Therefore, $I = \frac{V}{R}$

$$\frac{V}{R} = \frac{V}{R_1} + \frac{V}{R_2} + \frac{V}{R_3}$$



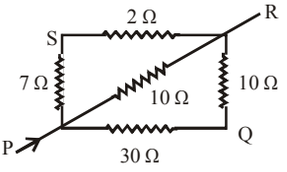
(1 mark)

$$\Rightarrow \frac{V}{R} = V\left[\frac{I}{R_1} + \frac{I}{R_2} + \frac{I}{R_3}\right]$$

$$\Rightarrow \frac{I}{R} = \frac{I}{R_1} + \frac{I}{R_2} + \frac{I}{R_3} \qquad \text{(1 mark)}$$

If two or more resistances are connected in parallel, then the reciprocal of total resistance is equal to sum of reciprocals of individual resistance.

(ii)



$R_1 = 7\,\Omega,\ R_2 = 2\,\Omega,\ R_3 = 10\ \Omega,$

$R_4 = 30\,\Omega,\ R_5 = 10\,\Omega, V = 6\,V$

Now, R_1 and R_2 are in series,

$R' = R_1 + R_2 = 7 + 2 = 9\ \Omega$

Also, R_4 and R_5 are in series,

$R'' = R_4 + R_5 = 30 + 10 = 40\ \Omega$

Now, R', R'' and R_3 are in parallel,

$$\frac{1}{R} = \frac{1}{R'} + \frac{1}{R''} + \frac{1}{R_3} \qquad \text{(1 mark)}$$

$$\Rightarrow \frac{1}{R} = \frac{1}{9} + \frac{1}{40} + \frac{1}{10}$$

$$\Rightarrow \frac{1}{R} = \frac{40 + 9 + 36}{360} = \frac{85}{360}$$

$$\therefore R = \frac{360}{85} = 4.23\ \Omega$$

$$V = IR \Rightarrow I = \frac{V}{R} = \frac{6}{4.23} = 1.41\,A \qquad \text{(1 mark)}$$

OR

Given, power of one heater (P) = 250 watt, potential (V) = 100 volt, time (t) = 5 hours.

(a) $P = \frac{V^2}{R}; R = \frac{V^2}{P} = \frac{100 \times 100}{250} = 40\ \Omega$

The three 250 watt heaters are connected in parallel then total current, $I = I_1 + I_2 + I_3$

$$= \frac{V}{R_1} + \frac{V}{R_2} + \frac{V}{R_3} = \frac{100}{40} + \frac{100}{40} + \frac{100}{40}$$

$= 2.5 + 2.5 + 2.5 = 7.5\,A$ (2 marks)

(b) The resistance of each heater is 40 Ω (1 mark)

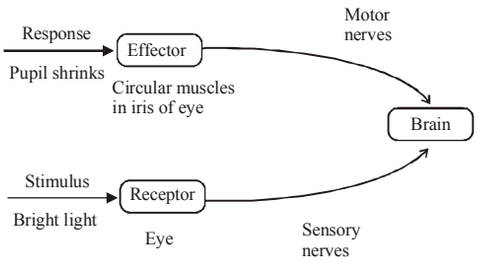
(c) The energy supplied to the first heater is $H = I^2Rt = (2.5)^2 \times 40 \times 5$ Wh, As current flowing each heater is 2.5 A

$\therefore H = 6.25 \times 200\ \text{Wh} = 1250\ \text{Wh}$

$$= \frac{1250}{1000}\text{kWh} = 1.25\text{kWh}$$

Then three heaters in connection = 3 × 1.25 kWh = 3.75 kWh energy is used in the circuit. (2 marks)

35. (i) The pathway taken by nerve impluses in a reflex action is called the reflex arc: (2½ marks)



(ii) **Auxin :** It promotes elongation and division of cell and root formation.
Gibberellins: They help in the growth of stem.
Cytokinins: They promote cell division and delay leaf ageing.
Abscisic acid: It prevent wilting of leaves. (2½ marks)

OR

GH strands for Growth hormone. It is secreted by pituitary gland.

Functions :

(i) It stimulates body growth by stimulating the retention of proteins and calcium in the body.

(ii) It also stimulates synthesis and deposition of proteins in the tissues.

Dwarfism is caused due to the failure of secretion of GH.

36. (a)

S. No.	Properties of baking powder	Uses
(i)	On heating releases CO_2 gas.	Baking industry
(ii)	Alkaline in nature, neutralises excess acid in stomach.	Antacid
(iii)	When it reacts with acid, it releases CO_2 gas which can extinguish fire.	Soda-acid fire extinguisher

$(1 \times 3 = 3$ marks)

(b) Acid + Metal $\longrightarrow$ Salt + Hydrogen

e.g., $2HCl + 2Na \longrightarrow 2NaCl + H_2\uparrow$

$H_2SO_4 + 2Na \longrightarrow Na_2SO_4 + H_2\uparrow$

$HNO_3 + Na \longrightarrow$ No hydrogen gas (1 mark)

Nitric acid does not release hydrogen gas when it reacts with metals. This is because nitric acid is strong oxidising agent. Nitric acid reacts only with magnesium and manganese to evolve hydrogen gas.

$Mg + 2HNO_3 \longrightarrow Mg(NO_3)_2 + H_2\uparrow$

$Mn + 2HNO_3 \longrightarrow Mn(NO_3)_2 + H_2\uparrow$ (1 mark)

OR

(a) Salts, having the same positive or negative radicals, are said to belong to the same family. (1 mark)

(b) It is because HCl and HNO_3 ionise in aqueous solution whereas ethanol and glucose do not ionise in aqueous solution. (2 marks)

(c) When a weak acid is added to a concentrated solution of hydrochloric acid, the solution becomes more acidic because it increases the hydronium ion concentration of the solution. (2 marks)

37. (i) Taenia and leech. (2 marks)

OR

(i) Heterotrophic nutrition is a mode of nutrition in which organisms depend upon other organisms for food to survive. (2 marks)

(ii) fungi (like Mushroom) (1 mark)

(iii) Autotrophic mode helps to fix carbondioxide into sugar by the process of hotosynthesis. (1 mark)

38. (a) Esterification reaction (1 mark)

(b) $CH_3COOH + CH_3CH_2OH \xrightarrow{Acid}$

Ethanoic acid Ethanol

$CH_3-\underset{\underset{O}{\|}}{C}-O-CH_2-CH_3$

Ester (1 mark)

Esters are used in making perfumes and as a flavouring agent.

(c) Reverse reaction is known as saponification reaction because it is used in the prepration of soap. (2 marks)

OR

The soap molecules have two parts:

(i) long chain hydrocarbon which is not solible in wate buit soluble in oil; it is known as hydrophobic part.

(ii) ionic part consists of Na+ or K+salts of carboxybates ion, which is soluble in water; it is known as hydrophilic part.

While the soap solutions comes in contact with the oily dirt the hydrophobic part interacts with oil and the ionic part faces outwards to interact with water. Thus, the soap micelle helps in dissolving the dirt in water and acts as cleansing agent. (2 marks)

39. (a) Alloys have high resistivity in comparison to pure metals. Also alloys do not oxidise readily at high temperatures but pure metals do. Therefore, alloys are used for making coils of electric toasters and electric irons rather than a pure metal. (1 mark)

(b) According to the Joule's law of heating effect

$H = I^2RT$ and $H \propto R$

Because the resistance of heating element is very high. So more heat is developed, hence it glows. But the cord has very low resistance, so it does not glow. (2 marks)

(c) The rate at which energy is delivered by a current is called the power which is given by $P = VI$

Thus, the potential difference (V) determine the power delivered by a current. (1 mark)

OR

(d) $V = 220V, R = 40\,\Omega$

$V = IR \Rightarrow I = \dfrac{V}{R} = \dfrac{220}{40} = 5.5\,A$ (1 mark)

Mock Test - Mathematics (Standard)

1. (a) If the lines are parallel, then

$$\frac{a_1}{a_2}=\frac{b_1}{b_2}\neq\frac{c_1}{c_2}$$

Here, $a_1=3, b_1=-1, c_1=-5$,
$a_2=6, b_2=-2, c_2=-p$

$$\Rightarrow \frac{3}{6}=\frac{-1}{-2}\neq\frac{-5}{-p} \qquad \text{... (i)}$$

Taking II and III part of equation (i), we get

$$\Rightarrow \frac{1}{2}\neq\frac{-5}{-p} \Rightarrow -p\neq -10 \Rightarrow p\neq 10$$

So, option (a) is correct.

2. (c) Let α, β be two zeroes of $2x^2-8x-\text{m}$, where $a=\frac{5}{2}$.

$$\therefore \text{a}+\text{b}=\frac{(-\text{Coefficient of x})}{\text{Coefficient of x}^2}$$

$$\Rightarrow \frac{5}{2}+\text{b}=\frac{8}{2}$$

$$\Rightarrow \text{b}=\frac{8}{2}-\frac{5}{2}=\frac{3}{2}.$$

3. (b) $a_n=a+(n-1)d=a+(n-1)2a$
$[\because d=3a-a=2a]$
$=a+2an-2a=2an-a=(2n-1)a$

4. (b) $\alpha+2\alpha=-\frac{b}{a}$ and $\alpha\times 2\alpha=\frac{c}{a} \Rightarrow 3\alpha=-\frac{b}{a}$

$$\Rightarrow \alpha=-\frac{b}{3a} \text{ and } 2\alpha^2=\frac{c}{a} \Rightarrow 2\left(\frac{-b}{3a}\right)^2=\frac{c}{a}$$

$$\Rightarrow \frac{2b^2}{9a^2}=\frac{c}{a} \Rightarrow 2ab^2-9a^2c=0 \Rightarrow a(2b^2-9ac)=0$$

Since $a\neq 0, \therefore 2b^2=9ac$
Hence, the required condition is $2b^2=9\text{ac}$

5. (d) $0.\overline{134}=\frac{134-1}{990}=\frac{133}{990}$

6. (c) $-\frac{3(1)+4(2)-7}{3(-2)+4(1)-7}=-\frac{4}{-9}=\frac{4}{9}$

7. (d) We know that $\sec^2\theta-\tan^2\theta=1$ and $\sec\theta=\frac{x}{p}$,

$$\tan\theta=\frac{y}{q}$$

$\therefore \quad x^2q^2-p^2y^2=p^2q^2$

8. (b) Since (x, y) is midpoint of (3, 4) and (k, 7)

$$\therefore \text{x}=\frac{3+\text{k}}{2} \text{ and } \text{y}=\frac{4+7}{2}$$

Also $2x+2y+1=0$ putting values we get
$3+\text{k}+4+7+1=0$
$\Rightarrow \quad \text{k}+15=0 \Rightarrow \text{k}=-15$

9. (c) Since, $DE \parallel BC \quad \therefore \Delta\text{ADE}\sim\Delta\text{ABC}$

$$\therefore \frac{AD}{DB}=\frac{AE}{EC}\Rightarrow\frac{1.5}{3}=\frac{1}{EC}\Rightarrow EC=2 \text{ cm}$$

10. (d) $(\cos^4 A-\sin^4 A)=(\cos^2 A)^2-(\sin^2 A)^2$

$=(\cos^2 A-\sin^2 A)(\cos^2 A+\sin^2 A)$

$=(\cos^2 A-\sin^2 A)(1)=\cos^2 A-(1-\cos^2 A)$
$=2\cos^2 A-1$

11. (b) Let the required ratio be K : 1
$\therefore$ The coordinates of the required point on the y-axis is

$$\text{x}=\frac{\text{K}(-4)+3(1)}{\text{K}+1};\ \text{y}=\frac{\text{K}(2)+5(1)}{\text{K}+1}$$

Since, it lies on y-axis
$\therefore$ Its x-cordinates = 0

$$\therefore \frac{-4K+3}{K+1}=0\Rightarrow -4K+3=0$$

$$\Rightarrow K=\frac{3}{4}$$

$\Rightarrow$ Required ratio $=\frac{3}{4}:1 \qquad \therefore$ ratio $=3:4$

12. (a) Perimeter of sector = 25 cm

$$\Rightarrow 2\text{r}+\frac{\theta}{360^\circ}\times 2\pi\text{r}=25$$

$$\Rightarrow 2\text{r}+\frac{90^\circ}{360^\circ}\times 2\times\frac{22}{7}\times\text{r}=25$$

$$\Rightarrow 2\text{r}+\frac{11}{7}\text{r}=25 \Rightarrow \frac{25}{7}\text{r}=25\Rightarrow \text{r}=7$$

$$\text{Area of minor segment}=\left(\frac{\pi\theta}{360^\circ}-\frac{\sin\theta}{2}\right)\text{r}^2$$

$$= \left(\frac{22}{7} \times \frac{90°}{360°} - \frac{\sin 90°}{2}\right)(7)^2$$

$$= \left(\frac{11}{14} - \frac{1}{2}\right) \times 49 = \frac{4}{14} \times 49 = 14 \text{ cm}^2.$$

13. **(d)** Since, two chords AB and CD of the circle are intersecting at P, when produced.

$\therefore$ PA. PB = PC.PD

[Each = (length of the tangent from P)^2]

$\Rightarrow$ (AB + PB). (PB) = (PD + DC) $\cdot$ PD

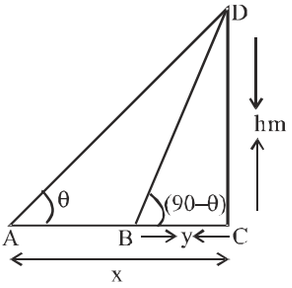
$\Rightarrow$ (5 + 3) (3) = (2 + x) 2

$\Rightarrow$ 24 = (2 + x) (2) $\Rightarrow$ 12 = 2 + x

$\Rightarrow$ x = 10 $\Rightarrow$ CD = 10 cm

14. **(b)** Let DC be the tower of height 'h' metres.

In rt. ΔACD, $\tan\theta = \frac{h}{x}$ ... (i)



In rt. ΔBDC, $\tan(90-\theta) = \frac{h}{y}$

$\Rightarrow \cot\theta = \frac{h}{y}$ ... (ii)

Multiplying (i) by (ii), we get

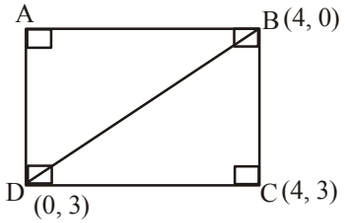
$$\tan\theta \times \cot\theta = \frac{h}{x} \times \frac{h}{y}$$

$$\Rightarrow \tan\theta \times \frac{1}{\tan\theta} = \frac{h^2}{xy}$$

$$\Rightarrow 1 = \frac{h^2}{xy} \Rightarrow h^2 = xy$$

$$\Rightarrow h = \sqrt{xy}$$

15. **(a)**



According to the figure

BD is the diagonal of ABCD.

By distance formula

$$BD = \sqrt{(x_2 - x_1)^2 + (y_2 - y_1)^2}$$

$$= \sqrt{(4-0)^2 + (0-3)^2}$$

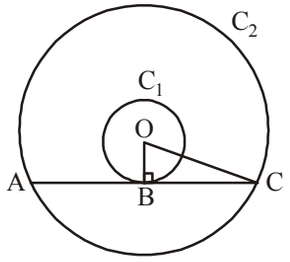
$$= \sqrt{25} = 5 \text{ units}$$

16. **(c)** $\bar{x} = \frac{20(4) + 40(5) + 30(6) + 10(10)}{20 + 40 + 30 + 10}$

$$= \frac{80 + 200 + 180 + 100}{100} = \frac{560}{100} = 5.6$$

17. **(b)** Suppose O be the centre of two concentric circles C_1 and C_2, whose radii are $r_1 = 4$ cm and $r_2 = 5$ cm we draw a chord AC to circle C_2, which touches the circle C_1 at B.

Then, join OB, which is perpendicular to AC.



Now, in right angled ΔOBC,

$OC^2 = BC^2 + BO^2$

by using Pythagoras theorem

$\Rightarrow 5^2 = BC^2 + 4^2$

$\Rightarrow BC^2 = 25 - 16 = 9$

$\Rightarrow$ BC = 3 cm

So, length of chord AC = 2 BC = 2 $\times$ 3 = 6 cm

18. **(a)**

19. **(c)** Here, reason is not true.

$\because \sqrt{4} = \pm 2,$ which is not an irrational number.

$\therefore$ Reason does not hold. Clearly, assertion is true.

20. **(a)** Both statements are correct and Reason is the correct for Assertion.

21. Let ages of father and son be x and y respectively.

$x + y = 40$ ...(i)

$x = 3y$ ...(ii) [1 Mark]

By solving eqs. (i) and (ii)

$x = 30$ and $y = 10$

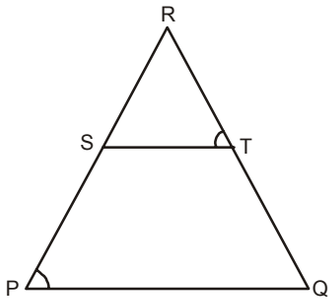
Ages are 30 years and 10 years. [1 Mark]

22. In figure,

We have ΔRPQ and ΔRTS in which

$\angle RPQ = \angle RTS$ (Given)

$\angle PRQ = \angle SRT$ (Each $= \angle R$) [1 Mark]



Then by AA similarity criterion, we have

$\Delta RPQ \sim \Delta RTS$ [1 Mark]

23. Consider $\sqrt{\sec^2\theta + \text{cosec}^2\theta} = \sqrt{\sec^2\theta + \text{cosec}^2\theta + 2 - 2}$

[1 Mark]

$= \sqrt{\sec^2\theta - 1 + \text{cosec}^2\theta - 1 + 2} = \sqrt{\tan^2\theta + \cot^2\theta + 2}$

$= \sqrt{(\tan\theta + \cot\theta)^2} = \tan\theta + \cot\theta$ [1 Mark]

24. In figure, TPOQ is a quadrilateral.

Here, $\angle OPT = \angle OQT = 90°$ [1 Mark]

[$\because$ radius is perpendicular to tangent]

$\Rightarrow \angle PTQ + \angle POQ = 180°$ [1 Mark]

[$\because$ sum of all angles of quadrilateral is 360°]

$\Rightarrow \angle PTQ + \angle 110° = 180° \Rightarrow \angle PTQ = 70°$

OR

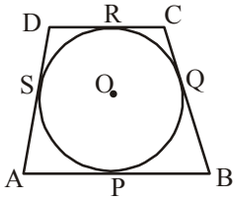
As, the tangents drawn from the exterior point to a circle are equal in length.

So, $DR = DS$ ... (i)

$AP = AS$ ... (ii)

$BP = BQ$ ... (iii)

$CR = CQ$ ... (iv) [1 Mark]



Adding (i), (ii), (iii) and (iv), we get

$DR + AP + BP + CR = DS + AS + BQ + CQ$

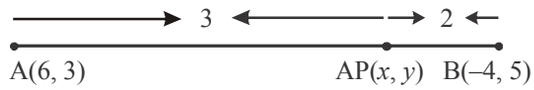
$\Rightarrow$ $(DR + CR) + (AP + BP) = (DS + AS) + (BQ + CQ)$

$\Rightarrow$ $CD + AB = DA + BC \Rightarrow AB + CD = BC + DA$ **(Hence Proved).** [1 Mark]

25. Let $P(x, y)$ be the required point. Then,

$$x = \frac{3\times -4 + 2\times 6}{3+2} \text{ and } y = \frac{3\times 5 + 2\times 3}{3+2}$$

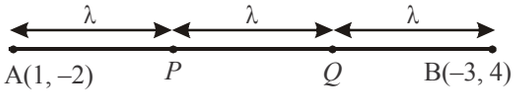
$\Rightarrow$ $x = 0$ and $y = \frac{21}{5}$ [1 Mark]



So, the coordinates of P are (0, 21/5) [1 Mark]

OR

Let A (1, – 2) and B (– 3, 4) be the given points. Let the points of trisection be P and Q. Then, $AP = PQ = QB = \lambda$ (say).



$\therefore$ $PB = PQ + QB = 2\lambda$ and $AQ = AP + PQ = 2\lambda$ [1 Mark]

$\Rightarrow$ $AP : PB = \lambda : 2\lambda = 1 : 2$ and $AQ : QB = 2\lambda : \lambda = 2 : 1$

So, P divides AB internally in the ratio 1 : 2 while Q divides internally in the ratio 2 : 1. Thus, the coordinates of P and Q are

$$P\left(\frac{1\times(-3)+2\times1}{1+2}, \frac{1\times4+2\times(-2)}{1+2}\right) = P\left(\frac{-1}{3}, 0\right)$$

$$Q\left(\frac{2\times(-3)+1\times1}{2+1}, \frac{2\times4+1\times(-2)}{2+1}\right) = Q\left(\frac{-5}{3}, 2\right)$$

respectively

Hence, the two points of trisection are (–1/3,0) and (–5/3,2)

[1 Mark]

26. Here, $a = 1$, and $d = 1$

$\therefore$ $S_{n-1} = \frac{x-1}{2}[2\times1 + (x-1-1)\times1]$

$= \frac{x-1}{2}(2 + x - 2) = \frac{(x-1)(x)}{2} = \frac{x^2 - x}{2}$

$S_n = \frac{x}{2}[2\times1 + (x-1)\times1] = \frac{x}{2}(x+1) = \frac{x^2 + x}{2}$ [1 Mark]

and, $S_{49} = \frac{49}{2}[2\times1+(49-1)\times1]$

$= \frac{49}{2}[2+48] = \frac{49}{2}\times50 = 49\times25$

According to the question, [1 Mark]

$S_{n-1} = S_{49} - S_x$

i.e., $\frac{x^2-x}{2} = 49\times25 - \frac{x^2+x}{2}$

$\Rightarrow \frac{x^2-x}{2} + \frac{x^2+x}{2} = 49\times25$

$\Rightarrow \frac{x^2-x+x^2+x}{2} = 49\times25$

$\Rightarrow x^2 = 49\times25 \quad \Rightarrow x = \pm7\times5$ [1 Mark]

$\because$ x is a counting number, so taking positive square root, $x = 7\times5 = 35$.

27. Here, $\frac{a_1}{a_2} = \frac{2}{a+b+1}$; $\frac{b_1}{b_2} = \frac{3}{a+2b+2}$;

$\frac{c_1}{c_2} = \frac{7}{4(a+b)+1}$

For Infinite number of solutions

$\frac{a_1}{a_2} = \frac{b_1}{b_2} = \frac{c_1}{c_2}$ or $\frac{2}{a+b+1} = \frac{3}{a+2b+2} = \frac{7}{4(a+b)+1}$

[½ Mark]

(I) (II) (III)

Taking I and II & taking II and III

$\frac{2}{a+b+1} = \frac{3}{a+2b+2}$ and $\frac{3}{a+2b+2} = \frac{7}{4(a+b)+1}$

[½ Mark]

$3a+3b+3 = 2a+4b+4$ and $12a+12b+3 = 7a+14b+14$

$a-b=1$ ... (i) [1 Mark]

and $5a-2b=11$ ... (ii)

Multiplying (i) by 2 and subtracting (ii) from (i)

$2a-2b=2$

$5a-2b=11$

$-3a = -9 \Rightarrow a = 3$

Putting the value of a in (i), we get

$a-b=1 \Rightarrow 3-b=1 \quad \Rightarrow b=2$ [1 Mark]

28. Let $y = f(x)$ or $y = 3-2x-x^2$

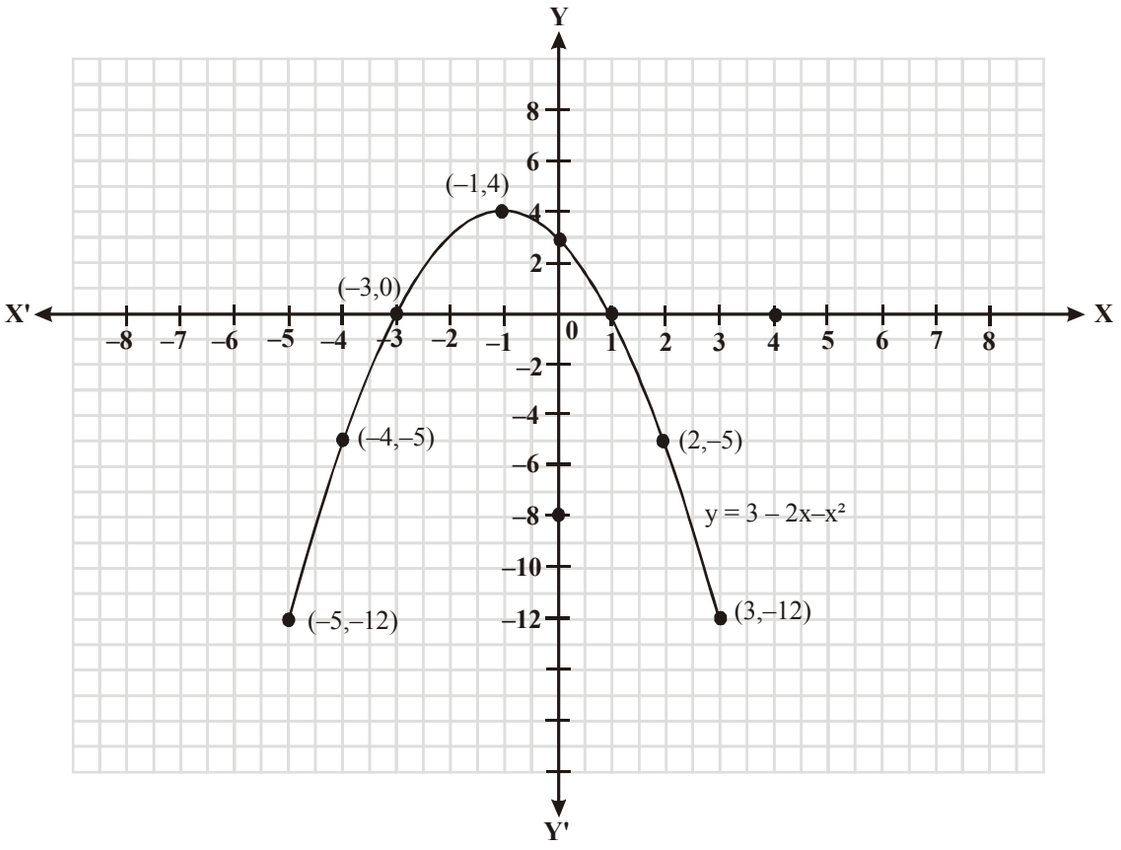
Let us list a few values of $y = 3-2x-x^2$ corresponding to a few values of x as follows :

x	–5	–4	–3	–2	–1	0	1	2	3
$y = 3-2x-x^2$	–12	–5	0	3	4	3	0	–5	–12

Thus, the following points lie on the graph of polynomial $y = 3-2x-x^2$:

(–5, –12), (–4, –5), (–3, 0), (–2, 3), (–1, 4), (0, 3), (1, 0), (2, –5), and (3, – 12)

Let us plot these points on a graph paper and draw a smooth free hand curve passing through these points to obtain the graph of y = 3 – 2x – x^2. The curve thus obtained is a parabola. [2 Mark]



[1 Mark]

The parabola intersects X-axis at $x = -3$ and 1. Therefore, zeroes or roots of the polynomial are –3 and 1.

29. $\text{LHS} = (m^2+n^2)\cos^2\beta = \left(\frac{\cos^2\alpha}{\cos^2\beta}+\frac{\cos^2\alpha}{\sin^2\beta}\right)\cos^2\beta$ [1 Mark]

$= \left(\frac{\cos^2\alpha\sin^2\beta+\cos^2\alpha\cos^2\beta}{\sin^2\beta\cos^2\beta}\right)\cos^2\beta$

$= \left(\frac{\cos^2\alpha\left(\sin^2\beta+\cos^2\beta\right)}{\sin^2\beta\cos^2\beta}\right)\cos^2\beta$

[1 Mark]

$= \left(\frac{\cos^2\alpha\cos^2\beta}{\sin^2\beta\cos^2\beta}\right) = \frac{\cos^2\alpha}{\sin^2\beta} = (n)^2 = \text{RHS}$

$\left(\because \frac{\cos\alpha}{\sin\beta} = n\right)$ [1 Mark]

Hence Proved.

OR

$2\,\text{cosec}^2 30° + x\sin^2 60° - \frac{3}{4}\tan^2 30° = 10$

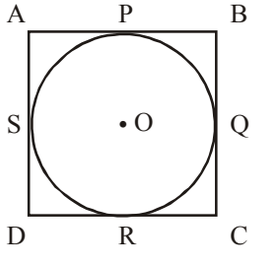
$\Rightarrow 2(2)^2 + x\left(\frac{\sqrt{3}}{2}\right)^2 - \frac{3}{4}\left(\frac{1}{\sqrt{3}}\right)^2 = 10$ [1 Mark]

$\Rightarrow 8 + \frac{3}{4}x - \frac{3}{4}\times\frac{1}{3} = 10$ [½ Mark]

$\Rightarrow \frac{3}{4}x = 10 - 8 + \frac{1}{4} \Rightarrow \frac{3}{4}x = \frac{40-32+1}{4}$ [½ Mark]

$\Rightarrow \frac{3}{4}x = \frac{9}{4} \Rightarrow 3x = 9 \Rightarrow x = 3$ [1 Mark]

30. **Given :** A quadrilateral ABCD circumscribes a circle with centre O.



To prove : AB + CD = AD + BC

Proof : Since, tangents drawn to a circle from an exterior point are equal

AP = AS I

BP = BQ II

CR = CQ III

DR = DS .....IV [1 Mark]

By adding I, II, III and IV we get,

$AP + BP + CR + DR = AS + BQ + CQ + DS$

$(AP + BP) + (CR + DR) = (AS + DS) + (BQ + CQ)$ [2 Marks]

$AB + CD = AD + BC$

Hence, proved.

31. Total number of possible outcomes when two dice are thrown simultaneously = 36 [1 Mark]

Sum of the numbers appearing on the dice is a prime number i.e., 2, 3, 5, 7 and 11

So, the possible outcomes are (1, 1), (1, 2), (2, 1), (1, 4), (2, 3), (3, 2), (4, 1), (1, 6), (2, 5), (3, 4), (4, 3), (5, 2), (6, 1), (5, 6) and (6, 5).

Number of possible outcomes = 15 [1 Mark]

$\therefore$ required probability $= \frac{15}{36} = \frac{5}{12}$ [1 Mark]

OR

Total no. of cards = 60 – 12 = 48

$\Rightarrow$ Total no. of outcomes = 48

Numbers are 13, 14, 15, 16, ..., 60.

(i) Numbers divisible by 5 are 15, 20, 25, 30, 35, 40, 45, 50, 55, 60. [1 Mark]

$\therefore$ Favourable outcomes = 10

$\therefore$ P(no. is divisible by 5) $= \frac{10}{48} = \frac{5}{24}$ [½ Mark]

(ii) Perfect square numbers are 16, 25, 36, 49 [½ Mark]

$\therefore$ Favourable outcomes = 4

$\therefore$ P(perfect square) $= \frac{4}{48} = \frac{1}{12}$ [1 Mark]

32. Given equation is $x^2 - 3x + 2 = 0$ [1 Mark]

On comparing with $ax^2 + bx + c = 0$, we get $a = 1, b = -3, c = 2$

Now, Apply discriminant

$D = b^2 - 4ac = (-3)^2 - 4(1)(2) = 1 \Rightarrow \sqrt{D} = 1$ [2 Marks]

The two roots are given by $\frac{-b \pm \sqrt{D}}{2a}$, *i.e.*, $\frac{3 \pm 1}{2} = \frac{4}{2}$ and $\frac{2}{2}$

[2 Marks]

Hence, the two roots are 1 and 2.

33. $\Delta ABC \sim \Delta PQR$

(Given)

$\Rightarrow \quad \frac{AB}{PQ} = \frac{BC}{QR} = \frac{AC}{PR}$;

$\angle A = \angle P, \angle B = \angle Q, \angle C = \angle R$ ...(1)

Now, $BD = CD = \frac{1}{2} BC$ and $QM = RM = \frac{1}{2} QR$ ...(2)

($\because$ D is mid-point of BC and M is mid-point of QR) [1 Mark]

From (1), $\frac{AB}{PQ} = \frac{BC}{QR}$

$\Rightarrow \quad \frac{AB}{PQ} = \frac{2BD}{2QM}$ (By (2))

$\Rightarrow \quad \frac{AB}{PQ} = \frac{BD}{QM}$ [2 Marks]

Thus, we have $\frac{AB}{PQ} = \frac{BD}{QM}$

and $\angle ABD = \angle PQM$ ($\because \angle B = \angle Q$)

$\Rightarrow \quad \Delta ABD \sim \Delta PQM$

(By SAS similarity critetrion)

$\Rightarrow \quad \frac{AB}{PQ} = \frac{AD}{PM}$ [2 Marks]

34. Canvas needed to make the tent = C.S.A of the conical part + C.S.A of the cylindrical part

Given that

Radius of the conical part = Radius of the cylindrical part

$= \frac{3}{2}$ m

Slant height of the conical part = l = 2.8 m

Height of the cylindrical part = h = 2.1m

C.S.A of the conical part $= \pi r l = \frac{22}{7} \times \frac{3}{2} \times 2.8 \text{ m}^2$ [1 Mark]

C.S.A of the cylindrical part $= 2\pi rh = 2 \times \frac{22}{7} \times \frac{3}{2} \times 2.1 \text{ m}^2$

[2 Marks]

$\therefore$ Total area of the canvas needed to make the tent

$= \frac{22}{7} \times \frac{3}{2} \times 2.8 + 2 \times \frac{22}{7} \times \frac{3}{2} \times 2.1$

$= \frac{22}{7} \times \frac{3}{2} \times (2.8 + 4.2) = \frac{22}{7} \times \frac{3}{2} \times 7 = 33 \text{ m}^2$ [1 Mark]

Cost of the canvas = ₹ 500/m^2

So, total cost of the canvas needed to make the tent = ₹ 500 × 33 = ₹16, 500 [1 Mark]

OR

Side of cube = 7 cm

Largest sphere carved out from cube with radius $= \frac{7}{2}$ cm

[1 Mark]

Vol. of wooden left = Vol. of cube – Vol. of sphere [2 Marks]

$= (\text{side})^3 - \frac{4}{3}\pi r^3 = 7^3 - \frac{4}{3} \times \frac{22}{7} \times \frac{7}{2} \times \frac{7}{2} \times \frac{7}{2}$

$= 343 - \frac{539}{3} = \frac{1029 - 539}{3} = \frac{490}{3} \text{ cm}^3$ [2 Marks]

35. Let a = 25 (assumed mean) and h = 10 (class interval)

Marks	f_i	Mid - Point (x_i)	Deviation $\left(u_i = \frac{x_i - 25}{10}\right)$	$f_i u_i$
0 – 10	20	5	–2	–40
10 – 20	24	15	–1	–24
20 – 30	40	25	0	0
30 – 40	36	35	1	36
40 – 50	20	45	2	40
Total	140			12

[2 Marks]

Since, mean = $a + \left(\frac{\sum f_i u_i}{\sum f_i}\right) \times h$ [1 Mark]

$\Rightarrow$ mean = $25 + \left(\frac{\sum f_i u_i}{\sum f_i}\right) \times 10 = 25 + \left(\frac{12}{140}\right) \times 10$

= 25.86 (Approximate) [2 Marks]

OR

From the given data, we have the modal class 35-40.

{$\because$ It has largest frequency among the given classes of the data}

So, $l = 35, f_m = 23, f_1 = 21, f_2 = 14$ and $h = 10$.

Mode $= l + \left\{\frac{f_m - f_1}{2f_m - f_1 - f_2}\right\} \times h$

$= 35 + \left\{\frac{23-21}{46-21-14}\right\} \times 10 = 36.8$ years

Now, let us find mean of the data : [2 Marks]

Age (in years)	Number of patients f_i	Class mark x_i	$u_i \frac{x_i - 30}{10}$	$f_i \times u_i$
5-15	6	10	– 2	– 12
15-25	11	20	– 1	– 11
25-35	21	**30 = *a***	0	0
35-45	23	40	1	23
45-55	14	50	2	28
55-65	5	60	3	15
Total	$n = 80$			43

$a = 30, h = 10, n = 80$ and $\sum f_i u_i = 43$ [2 Marks]

Mean $= a + h \times \frac{1}{n} \times \sum f_i u_i =$

$30 + 10 \times \frac{1}{80} \times 43 = 30 + 5.37 = 35.37$ years.

Thus, mode = 36.8 years and mean = 35.37 years.

[1 Mark]

So, we conclude that the maximum number of patients admitted in the hospital are of the age 36.8 years (apporx.), whereas on an average the age of a patient admitted to the hospital is 35.37 years.

36. (i) For getting least number of books,

taking LCM of 32, 36

4	32, 36
8	8, 9
9	1, 9
	1, 1

$\Rightarrow 4 \times 8 \times 9 = 288$ [1 Mark]

(ii) HCF of 32, 36 is

4	32, 36
	8, 9

[1 Mark]

= 4

(iii) $7 \times 11 \times 13 \times 15 + 15$

$\Rightarrow 15(7 \times 11 \times 13 + 1)$

so given no. is a composite number. [2 Marks]

OR

Given a, b are prime number. So

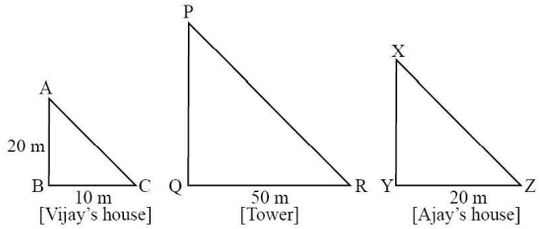
LCM of p, q, where $p = ab^2, q = a^2b$

$p = a \times b \times b$

$q = a \times b \times a$

$a \times b \times b \times a \Rightarrow a^2b^2$ [2 Marks]

37.



(i) $\because \ \Delta ABC \sim \Delta PQR$

$\therefore \ \dfrac{AB}{PQ} = \dfrac{BC}{QR} \Rightarrow \dfrac{20}{PQ} = \dfrac{10}{50}$

$\Rightarrow \ PQ = 100$

$\therefore$ Height of the tower = 100 m [1 Mark]

(ii) Let $BC = 12$ m and $PQ = 100$ m

$\dfrac{AB}{PQ} = \dfrac{BC}{QR} \Rightarrow \dfrac{20}{100} = \dfrac{12}{QR}$

$\Rightarrow \ QR = 60$ [1 Mark]

(iii) $\because \ \Delta ABC \sim \Delta XYZ$

$\therefore \ \dfrac{AB}{XY} = \dfrac{BC}{YZ} \Rightarrow \dfrac{20}{XY} = \dfrac{10}{20}$

$\Rightarrow \ XY = 40$ [2 Marks]

OR

Let $QR = 40$ m, PQ = 100 m and $XY = 40$ m

$\therefore \ \dfrac{PQ}{XY} = \dfrac{QR}{YZ} \Rightarrow \dfrac{100}{40} = \dfrac{40}{YZ} \ \Rightarrow \ YZ = 16$ m. [2 Marks]

38. (i) Volume of cylindrical cup = $\pi r^2 h$

$\dfrac{22}{7} \times \dfrac{7}{2} \times \dfrac{7}{2} \times 10.5 = 404.25 \text{ cm}^3$ [1 Mark]

(ii) Volume of hemispherical cup

$= \dfrac{2}{3}\pi r^3 = \dfrac{3}{2} \times \dfrac{22}{7} \times \left(\dfrac{7}{2}\right)^3 = 89.83 \text{ cm}^3$ [1 Mark]

(iii) Curved surface area of cone = 551 $\Rightarrow \pi rl = 441$

$\Rightarrow \ \dfrac{22}{7} \times 7 \times l = 551 \Rightarrow l = 25.045$

$\therefore \ h = \sqrt{l^2 - r^2} = 24$ m [2 Marks]

OR

Space occupied by each student = $\dfrac{\pi r^2}{4} = 38.5 \text{ m}^2$

[2 Marks]

Mock Test - Social Science

1. **(a)** Mahatma Gandhi returned to India from South Africa in 1915. **(1 Mark)**

2. **(c)** The Unification of Britain was achieved through political and social subjugation of various ethnicities by the English. English suppressed the Irish and Scottish ethnic iden tities through its political, social and territorial supremacy and forced them in a Union. **(1 Mark)**

3. **(a)** Among the following pairs, Pair A is incorrectly matched. The Greek Struggle for Independence begins in February 1821 when Alexander Ypsilantis, leader of the Etairists, crossed the Prut River into Turkish-held Moldavia with a small force of troops. **(1 Mark)**

4. **(d)** At the end of the eighteenth century, Poland was partitioned between the great powers of Prussia, Russia and Austria. As a result of this partition, Poland did not remain an independent territory. **(1 Mark)**

5. **(d)** All of the statements are true. **(1 Mark)**

6. **(b)** The crop described here is coffee. Indian coffee is known in the world for its good quality. The Arabica variety initially brought from Yemen is produced in the country. This variety is in great demand all over the world. Initially its cultivation was introduced on the Baba Budan Hills and even today its cultivation is confined to the Nilgiri in Karnataka, Kerala and Tamil Nadu. **(1 Mark)**

7. **(a)** 1-c, 2-d, 3-a 1, 4-b **(1 Mark)**

8. **(d)** Pulses are the important source of protein and minerals that are also known as poor man's meat. Pulses need less soil moisture and can survive in dry conditions. All the pulses except arhar have the ability to fix nitrogen and restore the soil fertility. They are grown in crop rotation so that the soil gets its nutrient back. Hence, both 'A' and 'R' are correct and R is the correct explanation of A. **(1 Mark)**

9. **(a)** I & II **(1 Mark)**

10. **(c)** The crop described here is Bajra. Bajra grows very well in dry and warm climatic regions, and it is a drought – tolerant crop with quite low annual rainfall of 40 cm to 60 cm. The ideal temperature range for Bajra cultivation is 20°C to 30°C. During its vegetative growth, moist weather is beneficial. **(1 Mark)**

11. **(c)** Power-sharing among organs of the government (legislature, executive, judiciary) is called a system of checks and balances. According to the Constitution, there are three organs of the State. These are the legislature, the executive and the judiciary. The legislature refers to our elected representatives. The executive is a smaller group of people who are responsible for implementing laws and running the government. The judiciary refers to the system of courts in this country. In order to prevent the misuse of power by any one branch of the State, the Constitution says that each of these organs should exercise different powers. Through this, each organ acts as a check on the other organs of the State and this ensures the balance of power between all three. **(1 Mark)**

12. **(d)** Power may be shared among different social groups such as the religious and linguistic groups. 'Community government' in Belgium is a good example of this arrangement. This power is shared among different social groups to give equal representation to each and every community of Belgium. It is made to protect every ethinc community of Belgium. **(1 Mark)**

13. **(b)** Policy of accommodation could be the measure the Belgian government will adopt in such a situation. Belgium is a model for accommodative politics in Europe. The constitution allows for equal representation of Dutch and French-speaking ministers in the central government.
Brussels has a separate government where both the French and the Dutch have equal representation. **(1 Mark)**

14. **(a)** Belgium's 59 % population lives in the Flemish Region and speaks Dutch language. They form a majority community in Belgium. **(1 Mark)**

15. **(d)** Under the unitary system, either there is only one level of government or the sub-units are subordinate to the central government. The central government can pass on orders to the provincial or the local government and state government is conservable to the central government. **(1 Mark)**

16. **(d)** Infant Mortality Rate can be substantially reduced only by improvements in the life and health of the majority. This is due to the fact that almost all the health and non-health components of a communit contribute to the morbidity and mortality of its children to a certain extent. **(1 Mark)**

17. **(b)** The primary source of income for banks is the difference between the interest charged from the borrowers and the interest paid to the depositors. Banks usually collect higher interest from loans than the interest they provide for deposits. **(1 Mark)**

18. **(b)** The sector discussed here is private sector. The private sector is the part of the economy that is run by individuals and companies for profit and is not state controlled. Therefore, it encompasses all for-profit businesses that are not owned or operated by the government. **(1 Mark)**

19. **(a)** Statement (I) is correct and (II) is incorrect. **(1 Mark)**

20. **(d)** All of these statements are hindrances in the development of the tertiary or service sector. The tertiary sector covers a wide range of activities from commerce to administration, transport, financial and real estate activities, business and personal services, education, health and social work. The major hindrances of this sector are- (i) Inadequate infrastructure. (ii) Lack of Financial services. (iii) Lack of consular divisions. (iv) Unfair competition in the telecom sector. **(1 Mark)**

21. (i) Men and women walking across the Statue of Liberty offering homage.

(ii) The Statue of Liberty has a torch of enlightenment and a Charter of the Rights of Man.

(2 Marks)

22. (A)
- Belgium is a small country in Europe, having a population of a little over one crore.
- 59 per cent of the country's total population lives in the Flemish region and speak Dutch language.
- Another 40 per cent people live in Wallonia region and speak French. Remaining one per cent of the Belgians speak German.
- Whereas in the Belgian capital, Brussels, 80 per cent of the population is French-speaking and 20 per cent is Dutch-speaking. **(2 Marks)**

OR

(B) The minority French-speaking community was relatively rich and powerful. So, the Dutch-speaking community, who got the benefit of economic development and education much later showed resentment between the Dutch-speaking and the French-speaking communities. **(2 Marks)**

23. Two broad guidelines for devising ways and means for political reforms in India are:-

(i) A law should be made to regulate the internal affairs of political parties. Political parties should maintain a register of its members, to hold open elections, to follow its own Constitution, etc.

(ii) Political parties can be monitored by ordinary citizens, pressure groups, media, etc. Pressure on political parties can be done through petitions, publicity and agitation. **(2 Marks)**

24. In the tribal areas of north-east India, minerals are owned by individuals or communities. Thus, coal mining in Jowai and Cherapunjee is done by family members in the form of a long narrow tunnel, known as 'Rat-hole' mining. **(2 Marks)**

25. Yes, means of transport, communication and trade are complementary to each other as mentioned below :

Transport and communication provide the infrastructural basis for conducting trade. The growth in trade also leads to creation of more infrastructure to match the volume of trade because increase in the volume of trade may need more means of transport.

More trade creates an avenue for investment in infrastructure through the revenue generated by trade.

The growth in trade means more transport like roads, railways, air, water and pipelines to be developed to keep the wheels of economy moving.

Communication helps in commercial transactions to be completed across different places all over the world. It helps to cross the geographical barriers and keeps the traders informed about their business instantly. The modern means of communication such as e-mail, mobile etc. are of great help for the traders all over the world. The world has become a village **(3 Marks)**

26. The exact balance of power between the central and the state government and within various state governments varies from one federation to another. This balance depends mainly on the historical context in which the federation was formed. There are two kinds of routes through which federations have been formed.

The first route involves independent states coming together on their own to form a bigger unit, so that by pooling sovereignty and. retaining identity they can increase their security. This type of coming together' federations include USA, Switzerland and Australia. In this first category of federations, all the constituent stales usually have equal power and are strong vis-a-vis the federal government. **(3 Marks)**

OR

(i) **Union List -** It includes subjects of national importance like defence, foreign affairs, banking, communications and currency as we need uniform policies on these matters throughout the country. The Union Government alone can make laws relating to the subjects mentioned in the Union list.

(ii) **State List -** It contains subjects of state and local importance like police, trade, commerce, agriculture and irrigation. The State Government alone can make laws relating to the subjects mentioned in the State list.

(iii) **Concurrent List:** It consists of subjects of common interest to both the Union and the States. Both the Parliament and the State Legislatures can make laws on the subjects included in this list. For example, education, forests, protection of wild animals and birds, weights and measures, etc.

27. Interest rate, collateral and documentation requirements, and the mode of repayment together comprise the terms of credit. The terms of credit vary substantially from one another. Every loan agreement specifies an interest which the borrower must pay me lender along with the repayment of the principal.

In addition, lenders may demand collateral (i.e. security against loan). Collateral is an asset that the borrower own, such as land, building, vehicle, livestock, deposits with the bank and uses this as guarantee to a lender until the loan is refunded. If the borrower fails to repay the loan, the lender has the right to sell the asset or collateral to obtain repayment payment such as land titles, deposits with banks and livestock are some common examples of collateral used for borrowing. **(3 Marks)**

28. The implications of First World War on the economic and political situation of India were Economic Situation

It led to a huge increase in defence expenditure which was financed by war loans. It resulted in raising custom duties and the introduction of income tax.

- Increased prices of essential commodities le to extreme hardship for the common people Political Situation

Forced recruitment of villagers into armies caused widespread anger among them.

There was an acute food shortage due to failure of crops and influenza epidemic which resulted in the death of millions of people. **(3 Marks)**

29. An organised sector covers those enterprises or places of work where the terms of employment are regular and therefore, people have assured work. They are registered by the government and have to follow its rules and regulations which are given in various laws such as the Factories Act, the Minimum Wages Act, the Payment of Gratuity Act, the Shops Act, etc.

(i) Workers in the organised sector enjoy the security of employment.

(ii) They work only for a fixed number of hours. If they work more, they have to be paid overtime by the employer.

(iii) They also get several other benefits from the employers like paid leave, payment during holidays, provident fund, gratuity, etc.

(iv) They also get medical benefits and, under the laws, the factory manager has to ensure facilities like drinking water and a safe working environment.

(3 Marks)

30. (A)

- **Poverty:** A reduction in poverty over the years would indicate the successful implementation of democracy.
- **Free and fair elections:** This represents a healthy democratic process in place.
- **Citizen's right to information:** This is important since only after citizens have the right information can they hold the government accountable.
- **Rule of law:** The presence of institutions like an independent judiciary helps uphold the law and ensures fairness, justice, and equal treatment for citizens.
- **Protection of minority rights:** This represents a strong commitment to democratic principles as it would enable the minority community to participate in the decision-making processes.

Rule of law: The presence of institutions like an independent judiciary helps uphold the law and ensures fairness, justice, and equal treatment for citizens.

(5 Marks)

OR

(B) The reasons for the civil war in Sri Lanka are-

(i) The democratically elected government in Sri Lanka adopted a series of majoritarian measures to establish Sinhala supremacy in Sri Lanka.

(ii) The government followed preferential policies that favoured Sinhalese in respect of job, religion and many more.

(iii) All the measures taken by the government gradually increased the feeling of alienation among the Sri Lankan Tamils. They felt deprived.

The impact of these measures on the country were

(i) People got divided on the basis of ethnic and linguistic communities along with a widespread conflict of violent nature.

(ii) Thousands of Sri Lankan Tamils were killed or were forced to leave their country.

(iii) The civil war gave a terrible setback to the social,. cultural and economic life of Sri Lanka that influenced even the Sinhala community.

(iv) People of both the communities suffered heavy losses.

31. (A) Public Sectors

In the public sector, government owns most of the assets and provides all the services, therefore it is also called state sector or government sector, e.g. Indian Railways. Bharat Heavy Electricals Limited, etc.

Private Sector

In the private sector, ownership of assets and delivery of services is in the hands of individuals or private companies, eg. Reliance Industries Limited (RIL), TISCO, etc. Motive of private sector is to earn profits.

Role of Public/Government Sector in an economy

Developing infrastructure which is done by developing. communication, heavy industries, building bridges, roads and railways, dams, generating electricity.

Encouraging the private sector to open industries and generate employment. Support farmers by buying food grains at a fair price and supports poor people by supplying food grains at low price in ration shops.

Provides health care facilities and education in backward and rural areas especially elementary education.

Dealing with problems of malnutrition, high infant mortality rate, unsafe drinking water, lack of housing, food and nutrition, etc. **(5 Marks)**

OR

(B) **Organised Sector**

It covers those enterprises or places of work where workers are given regular employment.

The enterprises are registered by the government and follow the rules and regulations such as Factories Act,

Minimum Wages Act, Payment of Gratuity Act, Shop and Establishment Act, etc.

Workers have job security, work for a fixed number of hours paid better wage and benefits like provident fund, medical leaves, paid holiday, etc.

The management ensures good working conditions like clean drinking water and a safe working environment.

Unorganized Sector

This sector is characterised by small and scattered units which are unregistered and donot follow governmental rules and regulations. Workers get lower wages and are not given facilities like paid holidays or paid leave due to sickness, etc. Working conditions are poor and there is no job security so employment is irregular. **(5 Marks)**

32. (A) Alluvial soil can be described as follows

(A) Formation - Alluvial soil is made-up of silt, sand and clay. It is deposited by three important Himalayan

river systems: the Indus, the Ganga and the Brahmaputra. It is bigger and coarser in the upper reaches of the river and becomes finer as the river flows down.

(B) Distribution/Area- This soil is prevalent in the river valleys of the Northern plains (Indus, Ganga, Brahmaputra), strips in Gujarat and Rajasthan, as well as in the Eastern coastal plains in the deltas of rivers of the Peninsular plateau (Mahanadi, Krishna, Kaveri).

(C) Classification- According to their age, alluvial soils can be classified as (Bangar) old alluvial and Khadar (new alluvial). Khadar has higher concentration of kankar and contains more fine particles than Bangar.

(D) Nutrients/Minerals - This soil is rich in nutrients like potash, phosphoric acid and lime, which is suitable for growing paddy, wheat, sugarcane and other cereal and pulse crops. **(5 Marks)**

OR

(B) Alluvial soil is the most widespread soil in India, which has been deposited by three important Himalayan river systems i.e. the Indus, the Ganges and the Brahmaputra.

Due to its high fertility, areas having this soil are intensively cultivated and densely populated.

Some features of alluvial soil are given below

It is mostly found in river valleys of the Northern Plains (Indus, Ganga, Brahmaputra), parts of Gujarat and Rajasthan, in Eastern coastal plains, especially in the deltas of Peninsular rivers (Mahanadi, Godavari, Krishna, Kaveri).

It is made up of silt, sand and clay. It is rich in nutrients like potash, phosphoric acid and lime.

It is suitable for growing paddy, wheat, sugarcane and other cereal and pulse crops. It is more common in the piedmont plains that are at the foothills such as Duars, Chos and Terai.

On the basis of age, it can be categorised as Bangar (old alluvial) and Khadar (new alluvial). Bangar soil is coarse but Khadar soil has fine particles and is more fertile. Bangar contains Kankar noodles.

Alluvial soil in the drier areas is more alkaline and needs fertilisers and good irrigation.

The particles of this soil are bigger towards the river valleys and this soil is coarse in the upper reaches of the valley.

33. (A) The European employers found it difficult to recruit labour in Africa because historically Africa had abundant land and a relatively small population. For centuries, land and livestock sustained African livelihoods and people had no need to work for a wage.

In late 19th century Africa, there were few consumer goods, so there was little reason to work for a wage. Europeans were attracted to Africa due to its vast resources of land and mineral. They came to Africa hoping to establish plantations and mines to produce crops and minerals for export to Europe. But there was an acute problem of shortage of labour.

The Europeans then used some methods to recruit and retain labour. These were

(i) Heavy taxes were imposed which could be paid only by working for wages on plantations and mines.

(ii) Inheritance laws were changed so that peasants were displaced from lands. Only one member of a family was allowed to inherit land, as a result of which the others were pushed into labour markets.

(iii) Mine workers were confined to compounds and not allowed to move freely.

(iv) Cattle disease rinderpest was introduced to destroy their dependence on livestock for sustenance.

(5 Marks)

OR

(B) In the 19th century, a large number of Indian labourers went to work on plantations, in mines and in road and railway construction projects around the world. The following factors were responsible for indentured labour migration from India

(i) In India, indentured labourers were hired under contracts. They promised with return travel to India. The agents provide them false information about the nature of work, living and working conditions. Hoping for a better future, the workers migrated in other countries.

(ii) Most Indian indentured workers came from the present-day regions of Uttar Pradesh, Bihar, Central India and the dry districts of Tamil Nadu. In these regions, cottage industries declined, land rents rose, lands were cleared for mines and plantations. All these factors forced the poor to migrate in search of work.

(iii) Many indentured labourers agreed to take up work hoping to escape poverty or oppression in their home villages. Labourers were largely required in other countries and the scope of employment forced the workers to migrate.

34. I. The proto-industrial system was a network of early form of commercial exchange before industrialisation. It was controlled by the merchants.

II. The early phase of industrialisation in which large-scale production was carried out for the international market not at factories but in decentralised units is called proto-industrialisation. It is called proto-industries because products are made by hand only. In this period, handmade products symbolises refinement and class. In proto-industrialisation, products were better finished, individually produced and carefully designed.

III Proto-industrialisation refers to the earliest phase of industrialisation.

The following were the main features of proto-industrialisation.

(i) The production was done by hand.
(ii) It was controlled by merchants or guilds who had monopoly rights to produce and trade goods.
(iii) Generally family members were involved in the production process. Production was carried out in the countryside. **(1 + 1 + 2 = 4 Marks)**

35. I. Neyveli reserves in Tamil Nadu are important lignite reserves in India.

II. Bituminous coal is a high grade coal and thus, a metallurgical coal. This type of coal has a special value for smelting iron in blast furnaces Important Property of Bituminous Coal. Bituminous coal is buried deep under the earth surface and is subjected to increased temperature It makes it unique to use in smelting iron-ore in blast furnaces.

III. Coal is associated with geological ages because coal is formed due to compression of plant material and takes million of years to come into existence. In India, coal occurs in rock series of two main geological ages, namely Gondwana rock series which is a little over 200 million year in age and in tertiary deposits rock series which are only about 55 million years old. Distribution of Coal Gondwana coal deposits are found in Damodar valley (West Bengal, Jharkhand), Jharia, Raniganj, Bokaro, coalfields. The Godavari, Mahanadi, Son and Wardha valleys also contain coal deposits. Tertiary coal deposits are found in the North-Eastern states of Meghalaya, Assam, Arunachal Pradesh and Nagaland.

(1 + 1 + 2 = 4 Marks)

36. I. The bifurcation into public and private sector is based on who owns the assets and is responsible for delivery of services.

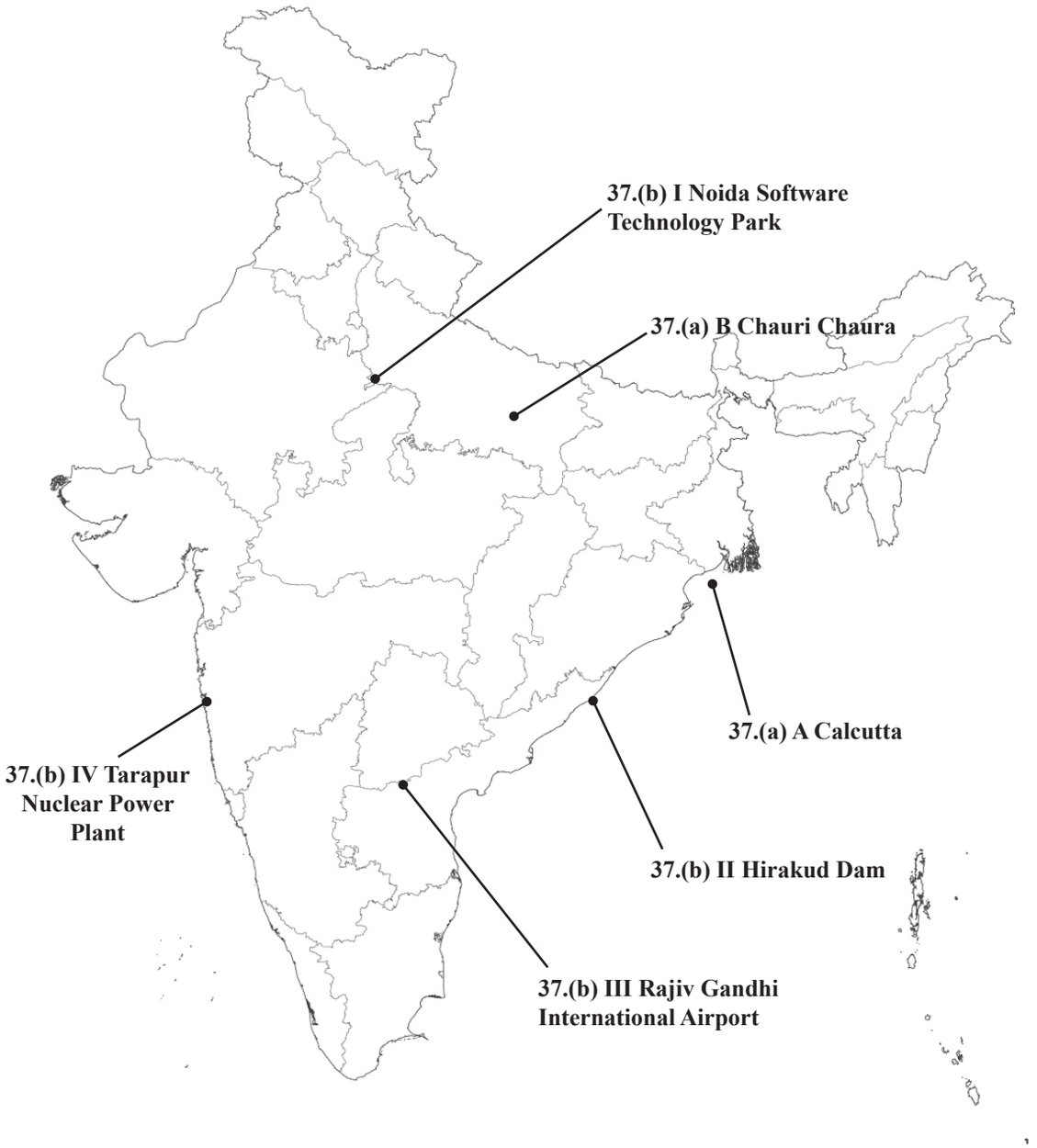
II. Railways and post office are counted in public sector due to following reasons- Railways is owned by the government and not by any private individual, Government is responsible for the delivery of various services through Post Offices.

III. Public Sector is needed in India due to
- Public Sector spends in different activities that are needed by the society which private sector cannot provide.
- Private sector will not provide services at reasonable prices, so the public sector is needed.

(1 + 1 + 2 = 4 Marks)

37.(a) A. Calcutta
B. Chauri Chaura

(b)


37.(b) I Noida Software Technology Park
37.(a) B Chauri Chaura
37.(a) A Calcutta
37.(b) II Hirakud Dam
37.(b) III Rajiv Gandhi International Airport
37.(b) IV Tarapur Nuclear Power Plant

Mock Test - English (Language and Literature)

SECTION-A: READING SKILLS

1. i. One such personality, who was so humble and lived his complete life with determination and purpose to achieve certain aims was Ishwar Chandra Vidyasagar. He was a great social reformer, writer and educator and worked endlessly to transform society.

ii. Borno Porichoy

iii. (b) English, Bengali
Explanation: He included English and Bengali as mediums of learning, besides Sanskrit.

iv. achieve liberation from society's oppression

v. (a) 1856

vi. (b) He was not moved by the pain of others.

vii. Ishwar Chandra Vidyasagar greatly promoted women-education. He opened school for girls, went door to door requesting the heads of families to enrol their daughters in school. He always offered help to his colleagues, friends and anyone who were in trouble.

viii. promoter

2. i. (a) Both A and R are true, and R is the correct explanation of A.

ii. Brazil

iii. The Amazon Rainforest is called the "lungs of the Earth" because it plays a critical role in absorbing carbon dioxide and producing oxygen. It helps regulate the Earth's climate by acting as a carbon sink, absorbing large amounts of CO_2 and releasing oxygen, which is vital for maintaining the atmospheric balance essential for life.

iv. The Amazon River provides water and sustenance to the diverse flora and fauna of the rainforest, supporting the entire ecosystem.

v. (c) Brazil

vi. (b) Polar Bear

vii. cattle ranching

viii. One major threat to the Amazon Rainforest is deforestation caused by activities like cattle ranching and agricultural expansion.

ix. flora and fauna

3. i. (d) would have to work hard

ii. (a) is correct

iii. (c) needs to

iv. went for a daily morning walk and did some breathing exercises

v. went

vi.

Error	Correction
but	also

vii. Seema asked Lakhan if shooting was challenging for him.

viii. that she had gone to her uncle's house with her parents, so she had forgotten to bring it.

ix.

Error	Correction
grown	grow

x. (a) found

xi. he had been offered a job there

xii. (c) through

4. **A.** 23, Rampur Road,
Delhi
March 26, 20xx
The Editor
Delhi Times
Delhi
Subject: Concern over growing accidents of Road Rage in Delhi
Sir,
Through the columns of your esteemed newspaper, I would like to draw the attention of the readers to the serious issue of growing incidents of road rage in Delhi. Now and then, we come across news of road rage where people start fighting on the roads on trivial issues. People are over stressed these days and the frustration is often displayed through such incidents. They start quarrelling on matters of small collision or honking or even on the issue of parking. Generally, the fight starts verbally which turns into a physical fight. Many incidents of serious injuries and death of people have been reported so far and hence, it needs an immediate attention from everyone.
The government should come forward with strict legal provisions to stop such issues and people should also learn to be patient and tolerant in order to make Delhi roads safe to travel.
Thank you
Yours truly
Akshay

OR

B. Guru Nanak Girls Sr. Sec. School
Lajpat Nagar
Kanpur

December 28, 20xx
The Manager
Dimple Caterers
Motijheel
Kanpur
Subject: Enquiry about catering charges
Sir,
We are conducting a farewell party for the students of class XII on 30th January, 20xx We want to know about your catering services. We wish to know the number of items that will be provided by you, the services and the catering cost per head. We will not in any way compromise on the service and quality of food. It should be the best Also, inform us whether you will be providing snacks and soft drinks along with the food and if sweet dish is included in your meal. If so, how many sweet dishes will be provided to us? We will need you to arrange the snacks, soft drinks, food, sweet dishes, crockery, etc. We request you to provide us with the best, prompt and quick servicemen.
Thank you
Yours sincerely
Tripti
(Head Girl)

5. A. WHEN YOU SMOKE YOU BURN YOUR LUNGS!!!

Smoking is one of the major causes of death throughout the world. The Ministry of Health published an advertisement stating that the number of smokers is rising. There are around 260 million smokers and that smokers have 20-25% higher risk of developing lung cancer and 2-3 times higher risk of having a heart attack. The risk of sudden death is three times higher. Not only smokers, even paste smokers have the risk of having bronchitis, pneumonia, asthma and a reduced rate of lung growth if the current patterns continue, smoking will cause 10 million deaths every year. Smoking brings brain stress, heart attack, lung cancer, sperm deformities in males and cancer of the cervix and infertility in females. It is high time people should become aware of the hazards and quit smoking.

OR

B. Tigers are the biggest cats in the world but their number is gradually decreasing because some of the tiger parts are used by people for various selfish purposes. The given data tells us that the number of Royal Bengal Tiger is as low as 30-35 in China. The estimated population of tigers in India ranges between 2500 and 3800 and is the highest as compared to other countries where this animal is found. Bangladesh comes next where the minimum number of tigers is 300 and goes up to a maximum of 460. Bhutan also shares the maximum number of Royal Bengal Tiger, i.e., 460 with Bangladesh but there is a vast difference between the minimum number which is 80 in it. The number of tigers in Nepal is also not very encouraging as the minimum number is 150. Even the maximum number is only 250. To sum up, we can say that the tiger is in danger as the data clearly indicates all this.

SECTION-C: LITERATURE TEXT BOOK AND SUPPLEMENTARY READING TEXT

6. A. i. Gautama Buddha is the speaker of the given lines.
ii. False
iii. 'Weeping' has the same meaning as crying heavily.
iv. Loss leads to lamentation. Loss, especially in form of death, is a universal condition that every human has to learn to live with. It is a truth of life and human condition. Buddha tries to preach the same lesson to Kisa Gautami when she comes to seek extraordinary help from him.

OR

B. i. Owning a gun gave a menacing impression to Max's character because gun has a threatening implication.
ii. Option (a) is correct.
Explanation: Both the sets comprise characteristic features.
iii. The idiom 'to raise the devil' means 'to cause a lot of serious issues or disruptions for someone or something'.
iv. Ausable very cleverly convinced Max that there existed a balcony below the windowsill of his room. In fact, it was a trap to make Max jump out of the window. He unnerved Max by cooking up a false story of the arrival of the police.

7. A. i. The dragon Custard was tickled by Belinda.
ii. She tickled him in order to make him laugh a little, as the cage looked very scary and it was making the dragon sad and anxious.
iii. Ink is a little kitten; Blink is a grey mouse and Mustard is a yellow dog.
iv. (a) Because they thought he was coward.

OR

B. i. (c) instructive
ii. tranquil
iii. True. She wanted to be free. She dreamt of

escaping her reality where she was not scolded, controlled and misunderstood

iv. (b) reprimanding

8. i. Chinese Legend is that once a few leaves of the twigs burning under the pot fell into the water and gave a delicious flavor. It is said that they were used as tea leaves according to Indian legend. Bodhidharma cut off his eyelids because he felt sleepy during meditations. Ten tea plants grew out of the eyelids. The leaves of these plants when put in hot water and drunk banished sleep.

ii. As a boy being free for Nelson Mandela meant to run freely in the nearby fields, to ride on the broad backs of the slow-moving bulls, to swim in the clear stream that flowed through his village, or to see stars and open fields at night. As a student to stay out at night to read what he pleases and to go wherever he chose was being free.

iii. Chubukov was eager to marry off his daughter Natalya.So he was quite happy when Lomov asked for the hand of his daughter in marriage. He kissed Lomov and blessed him.

iv. And the central theme of the poem is destruction. Hence, the word 'Fire' stands for greed, avarice, lust, conflict, and fury. 'Ice' stands for cruelty, intolerance, rigidity, insensitivity, coldness, indifference, and hatred. The general opinion regarding the world is that the world will end in fire and some say in ice.

v. Valli was a keen observer as well as a meticulous planner. Her desire to experience a bus ride was realised by systematic and organised planning. She had collected all the useful information by observing and planning and making discreet inquiries about the time of the bus, the duration of the journey as well as the fare. She was focussed and saved every penny to finance her trip and finally accomplished it by efficient execution of her plans.

9. i. When Richard Ebright entered a country science fair in seventh grade, he learned an important lesson about the value of original and creative ideas. Initially, he had entered a project that was similar to those of other students, but he realized that to stand out and achieve success, he needed to develop a unique and innovative project. This experience taught him the importance of originality and the need to pursue novel ideas in scientific research, which later influenced his approach to science and led to his accomplishments as a prominent scientist.

ii. Mme Loisel who had borrowed a necklace from Mme Forestier to wear at the minister's ball lost it by the time she was back home. Both her husband and she could not find it and decided to replace it with a new one. This costed them 36,000 francs and 10 years of toil and suffering. At the end of the story, she was shocked to know from Mme Forestier that her necklace (diamond one) was fake and did not cost over 50 francs.

iii. Griffin was a brilliant scientist who misused his scientific discovery and became a lawless person. He started enjoying harming people. When his landlord tried to catch him, in revenge Griffin set fire to the house. His invisibility became a curse for him. He misused his discovery for sadistic pleasures.

10. A. Woman: Are you all alone, dear?
Valli: Yes, I am travelling alone.
Woman: You are so young. You should not travel alone.
Valli: Oh, why don't you mind your own business?
Woman: Oh my God' Such big mouth! Child, you should travel with your parents.
Valli: Moreover, I don't like talking to strangers.
Woman: How rude you are?
Valli: Will you stop your conversation here? I'm getting bored. You're so ugly to look at. And that betel juice spilling over your lips, Ugh! It's making me sick.
Woman: It's no use talking to you.

OR

B. Lencho was a simple and hard-working farmer. His corn crops were destroyed in a hailstorm and he was very sad. He felt that he and his family would go hungry the whole year unless they found someone who could help them. He had a firm faith in God, so he started correspondence with God and asked for a hundred pesos. He was confident of receiving the amount. The letter, on the other hand, was read by the postmaster of the post office.

To ensure that Lencho does not lose faith in God, the postmaster collected money from post office employees and sent the 70 pesos that he had collected to Lencho. When Lencho opened the envelope, he found a lesser amount in it. He was not happy. He thought that the rest of the money had been taken by the post office employees. He called them a bunch of crooks and wrote another letter to God asking for the remaining money but telling Him (God) not to send it through the Post Office employees. He did not realise the irony that it was, in fact, those people only who were the real helpers calling them a bunch of crooks was not at all justified.

11. A. Bholi gives out great lessons to women at large. She is a symbol of the value of education, marriage and

the general well-being of girls. Earlier, she was like a dumb cow. But education made her a woman of substance. In fact, her teacher was behind her self-confidence, self-respect and self-determination. She now had the capacity to know what is right and what is wrong. She was fully aware of her rights and so she rejected the proposal of the greedy man, Bishamber. She took the right decision by telling her parents that she would serve them in their old age. In this way, she not only showed her love and affection for her parents but also became an inspiration for all the girls.

OR

B. Hari Singh, a boy of 15, was an experienced and successful thief. He was successful because of his cleverness and intelligence. He planned everything meticulously before choosing his victims. He went to places where he would meet an unsuspecting victim. He would, then, win his confidence to get a job. After sometime, he used to run away after stealing money from them. Then he used to change his name to befool the police and his former employers. Thus, he was a liar. He got a job as a cook, though he could not cook well. He was a greedy boy. He was cruel enough to rob a simple and trusting man like Anil. He managed to steal six hundred rupees from his house. But, there is a transformation at the end of the story. when he decides to come back to Anil and keep his trust alive. This shows that there is goodness concealed in even the worst of men. Hari Singh wanted to become an educated person in future. He wanted to mend his ways by becoming a big, clever and respected man and earn his livelihood honestly instead of stealing.