TARGET BOARD EXAMINATION 2025-26

DAY 1
1/50

Social Science

Q1."The Silk route was a good example of vibrant premodern trade and cultural links between distant parts of the world." Explain the statement with any two examples.

Ans. The following explains why the silk routes are an excellent illustration of commerce and cultural ties between distant regions of the world:

(i) *Several land– and sea– based silk routes that connected Asia with Europe and Northern Africa as well as enormous swathes of Asia have been recognised by historians.*

(ii) *Through these paths, the China– monopolised arts of silk weaving and sericulture expanded to Iran, Central Asia and other countries.*

(iii) *Gold and silver, two precious metals, were traded from Europe to Asia.*

(iv) *Buddhism originated in India and dispersed across the Silk Road's intersections in multiple directions.*

Q2. Suggest any two measures for the conservation of forest.

Ans.

(i) Deforestation control: *Cutting of tree should be limited and selective cutting should be done. Young trees should not be cut down as far as possible. Harvesting should be plan and should be optimal for the benefit of forests.*

(ii) Methods of farming should be changed: *Farming practices such as burn slash agriculture should be changed because they are very harmful to the environment and forest.*

(iii) Prevention from forest fire: *Forest should be protected from forest fires. The dried leaves and bark of trees must be regularly cleared out and chemicals to control fire should be available easily.*

(iv) Regulating overgrazing: *Overgrazing should be regulated in order to conserve forest and protect them from the verge of exploitation.*

Q3. Suggest any two measures for the conservation of wildlife

Ans. ***(i)*** *Any laws that prohibit the killing or capturing of birds or animals in danger of extinction should be passed. It must be designated as a criminal offence. These laws ought to be upheld in their entirety and not just on paper.*

(ii) *Regardless of the quantity of wild birds and animals, forest authorities should not permit their indiscriminate killing.*

The natural habitats of wild animals and birds should be preserved by creating more national parks and sanctuaries across the nation.

(iv) *Every forest should regularly undergo a wildlife conservation survey by the Department of Government. To help them during floods and famines, they should be informed about the numbers of every wild animal and bird species*

Q4. Differentiate between Public and Private Sector.

Ans : *Comparison of economic activities in private sector and public sector:*

(i) Most of the assets of public sector are owned by the government while private sector is owned by individuals or group of individuals.

(ii) Government provides all services in public sector while in private sector it depends on private owner.

(iii) Government raises money for various activities through taxes while private sector collects money for the services they provide.

(iv) Activities in the private sector are guided by the motive to earn profits while public sector is not just to earn profits.

(v) Railways, post office are examples of public sector while Tata Steel and Reliance are examples of private sector.

Q5. Describe any three causes that led to the Non- Cooperation Movement

Ans: *(i) Gandhiji launched the Non– Cooperation Movement with the aim of self– governance and obtaining full independence.*

(ii) The Indian National Congress withdrew its support for British reforms against the Rowlatt Act and the Jallianwala Bagh incident.

(iii) Indian Muslims who had participated in the Khilafat Movement to restore the status of the Caliph (the spiritual leader of Muslims) gave their support to the Non Cooperation Movement.

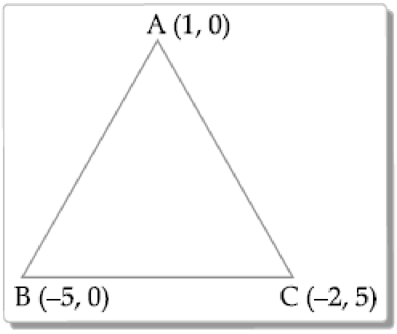
MATHEMATICS

Q1. Find the type of triangle ABC formed whose vertices are A(1, 0), B(–5, 0) and C(–2, 5).

Sol. *Given*

Vertices of a triangle

A(1, 0), B(– 5, 0) and C(– 2, 5)



Distance of

$$AB = \sqrt{(1+5)^2 + (0-0)^2}$$

$$\Rightarrow \quad AB = 6$$

Distance of

$$AC = \sqrt{(1+2)^2 + (0-5)^2}$$

$$\Rightarrow \quad AC = \sqrt{9+25}$$

$$\Rightarrow \quad AC = \sqrt{34}$$

$\Rightarrow$ Distance of BC

$$BC = \sqrt{(-2+5)^2 + (5-0)^2}$$

$$= \sqrt{9+25}$$

$$\Rightarrow \quad BC = \sqrt{34}$$

When two sides are equal, isosceles triangle is form

Q2. If 2 sin(A + B) = $\sqrt{3}$ and cos(A – B) = 1, then find the measures of angles A and B.

Sol. *2 sin (A + B) = $\sqrt{3}$*

0 <A, B, (A + B) < 90°.

$$\Rightarrow \quad \sin(A+B) = \frac{\sqrt{3}}{2}$$

$$\Rightarrow \quad \sin(A+B) = \sin 60$$

$$A + B = 60 \qquad \text{...(i)}$$

$$\cos(A-B) = 1$$

$$\cos(A-B) = \cos 0$$

$$A - B = 0 \qquad \text{...(ii)}$$

Adding (i) and (ii)

$$2A = 60$$

$$A = 30°$$

From (i)

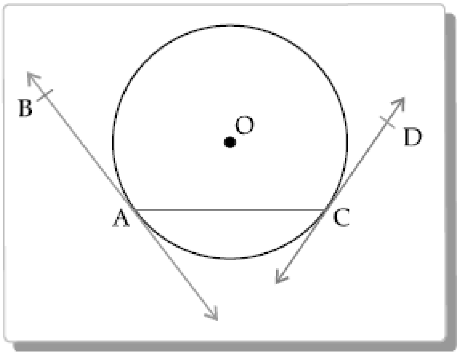
$$30 + B = 60$$

$$B = 30°$$

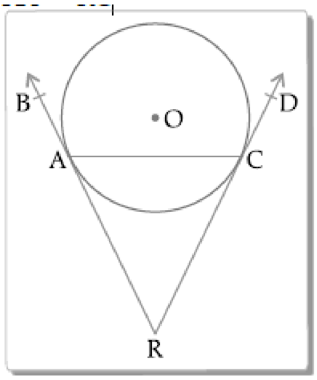
∠A = 30°,∠ B = 30°

Q3. In the given figure, AB and CD are tangents to a circle centred at O. Is ∠BAC = ∠DCA? Justify your answer.

Sol. *Tangent to a circle from an external point are equal RA = RC*



Tangent to a circle from an external point are equal
RA = RC



So,

∠RAC = ∠RCA

Let

∠RAC = ∠RCA = x

BAR and DCR are straight line.

⇒ ∠BAC + ∠CAR = RC

⇒ ∠ BAC + x = 180

⇒ ∠BAC = 180 – x

Similarly,

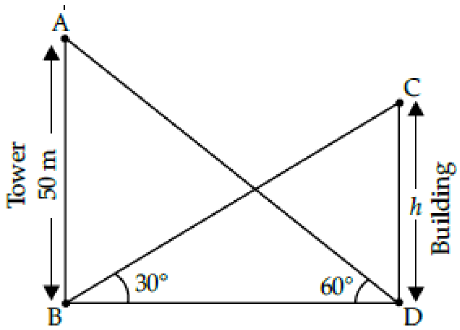
⇒ ∠DCA = 180 – x

So ∠BAC = ∠DCA

Q4. **The angle of elevation of the top of a building from the foot of a tower is 30° and the angle of elevation of the top of a tower from the foot of the building is 60°. If the tower is 50 m high, then find the height of the building.**

Sol. According to question,

In Δ*ABD*



$$\tan 60° = \frac{AB}{BD}$$

$$\Rightarrow \quad \sqrt{3} = \frac{50}{BD}$$

Q5. *Water in a canal, 6 m wide and 1.5 m deep, is flowing with a speed of 10 km/h. How much area will it irrigate in 30 minutes, if 8 cm standing water is required ?*

Sol. *Speed of water in canal = 10 km/h*

$$\text{In 30 min} = \frac{30}{60} = \frac{1}{2}\text{ h}$$

$$\therefore \text{ Length of water} = 10 \times \frac{1}{2} = 5\text{ km}$$

$$= 5000\text{ m.}$$

Volume of water is canal in 30 min

= Volume of water for irrigation

$$\Rightarrow \quad 6 \times 1.5 \times 5000 = \frac{8}{100} \times l \times b$$

$$\Rightarrow \quad l \times b = \frac{6 \times 1.5 \times 5000 \times 100}{8}$$

$$= \frac{4500000}{8} = 562500\text{ m}^2$$

Hence, area irrigated in 30 min is 562500 m².

$$\Rightarrow \quad BD = \frac{50}{\sqrt{3}}$$

Now in ΔBDC,

$$\tan 30° = \frac{CD}{BD}$$

$$\Rightarrow \quad \frac{1}{\sqrt{3}} = \frac{h}{\frac{50}{\sqrt{3}}} = \frac{h\sqrt{3}}{50}$$

$$\Rightarrow \quad 3h = 50$$

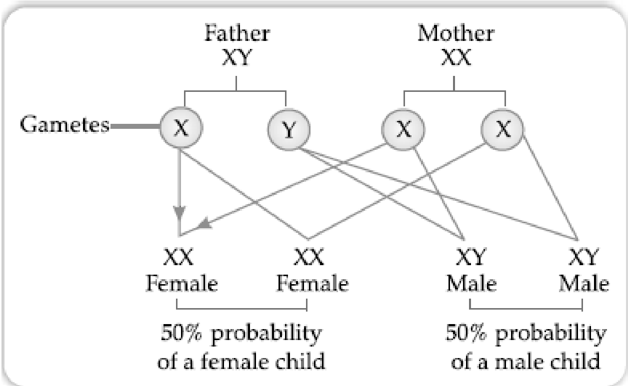
$$\Rightarrow \quad h = \frac{50}{3} = 16.67$$

Hence, the height of the building is 16.67 m.

SCIENCE

Q1. *Draw a flow chart to show that sex is determined genetically in human beings.*

Ans :



Q2. ***(i) What is double circulation ?***
(ii) Why is the separation of the right side and the left side of the heart useful? How does it help birds and mammals?

***Ans**: (i) Double circulation is the process during which blood passes twice through the heart during one complete cycle. Blood is circulated to the body tissues through systemic circulation and to the lungs through pulmonary circulation.*

(ii) The separation of right side and left side of the heart helps in separation of oxygenated and deoxygenated blood, which allows a more efficient supply of oxygen to the body cells.
Birds and mammals are warm blooded animals. Since, they require more energy to maintain a constant body temperature; hence, the separation provides availability of oxygen during respiration to generate more energy for thermoregulation

Q3. **(i) *Name the part of brain which is responsible for the following actions:***
(i) Maintaining posture and balance
(ii) Beating of heart
(iii) Thinking
(iv) Blood pressure

*Ans: **(i)** Cerebellum*
***(ii)** Medulla*
***(iii)** Cerebrum*
***(iv)** Medulla*

(II) ***Where are auxins synthesized in a plant? Which organ of the plant shows: 2***
(i) Positive phototropism
(ii) Negative geotropism
(iii) Positive hydrotropism

Ans : Auxins are synthesized in the growing regions at the tip of the shoot and root in a plant.
***(i)** Positive phototropism – Shoot*
***(ii)** Negative geotropism – Shoot*
***(iii)** Positive hydrotropism – Root*

Q4. ***Write one specific function each of the following organs in relation with excretion in human beings:***

(i) Renal Artery

(ii) Urethra

(iii) Glomerulus

(iv) Tubular part of nephron

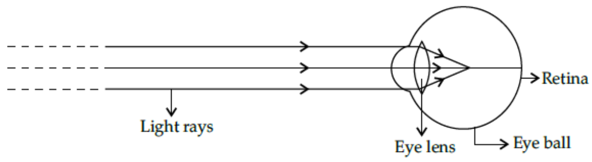
Ans. *(i) Renal artery carries oxygenated blood towards the kidneys.*

(ii) Urethra releases urine out of the body.

(iii) Glomerulus helps in filtration of blood passing through it and passes it on to the Bowman's capsule.

(iv) The tubular part of nephron reabsorbs useful products like glucose, amino acids, ions and a large amount of water into blood capillaries.

Q5. ***Observe the following diagram and answer the questions following it:***



(i) Identify the defect of vision shown.

(ii) List its two causes.

(iii) Name the type of lens used for the correction of this defect.

Ans: (i) *Myopia, as image is formed before the retina far away objects*.

(ii) *Possible causes are:*

(1) *Elongation of eyeballs.*

(2) *Excessive curvature of eye lens.*