

Date: 21-10-2025

Mock-4

Day: _____

MEMOONA ARSHAD

BATCH-2H

GENERAL SCIENCE AND

ABILITY

SECTION-II

Q-6 (b)

Data given:

Price of camera = 200\$

Discount = 25%

Tax = 6%

To Find:

Total amount paid = ?

Solution:

$$\text{Discount price} = \frac{25}{100} \times 200$$

$$= 50 \$$$

$$\text{Discount price} = 200 - 50 = \boxed{150 \$}$$

$$\text{Tax price} = \frac{6}{100} \times 150 = 9 \$$$

$$\text{Total amount paid} = 150 + 9 = \boxed{159 \$}$$

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(C)

Given Data:

Distance covered = 36 km

Speed = 18 km/hr

Starting Time = 1 pm

To Find:

Time at which it reaches = ?

Solution:

$$\text{Time} = \frac{\text{Distance}}{\text{speed}}$$

$$= \frac{36}{18}$$

$$\boxed{\text{Time} = 2 \text{ hrs}}$$

$$\text{Time} = \text{starting time} + 2 \text{ hrs}$$

$$= 1 \text{ pm} + 2 \text{ hrs} = \boxed{3 \text{ pm}}$$

It reaches at 3 pm.

(d) Unscramble

(i) STSTAICITS

Ans: STATISTICS

(ii) LGEBMAR

Ans: GAMBLER

Q.7

(a)

Given Data:

Diameter = 14 cm

$$\pi = \frac{22}{7}$$

To Find:

volume of sphere = ?

Solution:

$$\text{Vol of sphere} = \frac{4}{3} \pi r^3 \quad \text{--- (1)}$$

To find radius "r"

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

$$r = \frac{14}{2} = \boxed{7\text{cm}}$$

To find "vol" of sphere, put value of "r" in eq - (1)

$$\begin{aligned} \text{Vol of sphere} &= \frac{4}{3} \times \frac{22}{7} \times (7)^3 \\ &= \frac{4}{3} \times \frac{22}{7} \times 343 \\ &= \frac{4312}{3} \end{aligned}$$

$$\boxed{\begin{array}{l} \text{Vol of} \\ \text{sphere} \end{array} = 1437.33\text{cm}^3}$$

(b)

Given Data:

Five friends' total saving = RS. 25000

Ratio of share = 1:2:3:4:5

To Find:

Smallest share = ?

Solution:

$$\text{Total parts} = 1+2+3+4+5 \\ = 15$$

$$\text{Share of Friend-1} = \frac{25000}{15} \times 1 \\ = \boxed{1666.67 \text{ Rs.}}$$

$$\text{Share of Friend-2} = \frac{25000}{15} \times 2 \\ = \boxed{3333.33 \text{ Rs.}}$$

$$\text{Share of Friend-3} = \frac{25000}{15} \times 3 \\ = \boxed{5000 \text{ Rs.}}$$

$$\text{Share of Friend-4} = \frac{25000}{15} \times 4 \\ = \boxed{6666.67 \text{ Rs.}}$$

$$\text{Share of Friend-5} = \frac{25000}{15} \times 5 \\ = \boxed{8333.33 \text{ Rs.}}$$

$$\boxed{\text{Smallest Share} = 1666.67 \text{ Rs.}}$$

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(c) Spot the error/Complete the series

i. 2, 6, 18, 54, 162, 486

Ans: 2 does not fit here. Because, all the numbers except 2 are divisible by 3.

ii. 3, 5, 7, 11, 13, ____.

Ans: 15

(d)

Given data:

Sides of triangle

To Find:

All three angles

Solution:

To find all three angles:

$$= (n-2) \times 180^\circ$$

$$\therefore \text{Sides of } ^n \text{triangle} = 3$$

$$= (3-2) \times 180$$

$$= 1 \times 180$$

Angle of all sides of a triangle $= 180^\circ$

SECTION-I

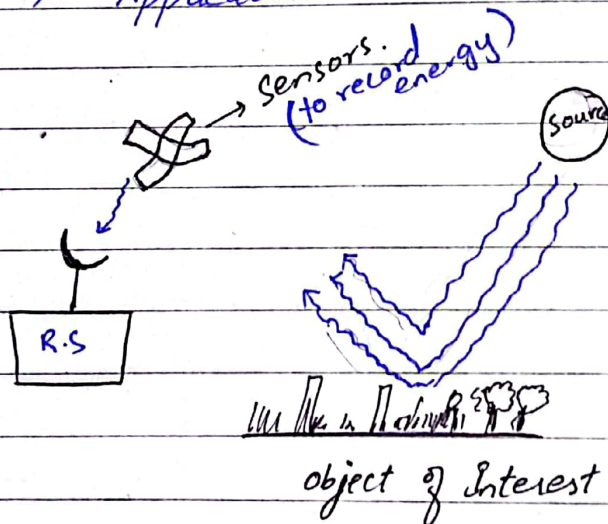
Q-5: (b) Remote Sensing

Remote Sensing:

The scientific and systematic process to gather information about the object of interest without direct contact.

Working Principles of Remote Sensing

- 1) Energy Source
- 2) Radiation and Atmosphere
- 3) Interact with object of interest
- 4) Recording with Sensors
- 5) Transmission, reception and processing
- 6) Interpretation
- 7) Application



GIS (Geographic Information System)

It is a type of computerized system to present gathered information in the form

of maps.

Role of GIS in environmental Science

- GIS is used in land planing and agricultural planing.
- It can also be used in urban planing.
- GIS is helpful in disaster management.
- GIS helps in environmental policy making and planing process.
- GIS helps in weather prediction.

(C) "Atmosphere is the blanket of Earth"

Atmosphere: mixture of gases surrounding the earth is called atmosphere.

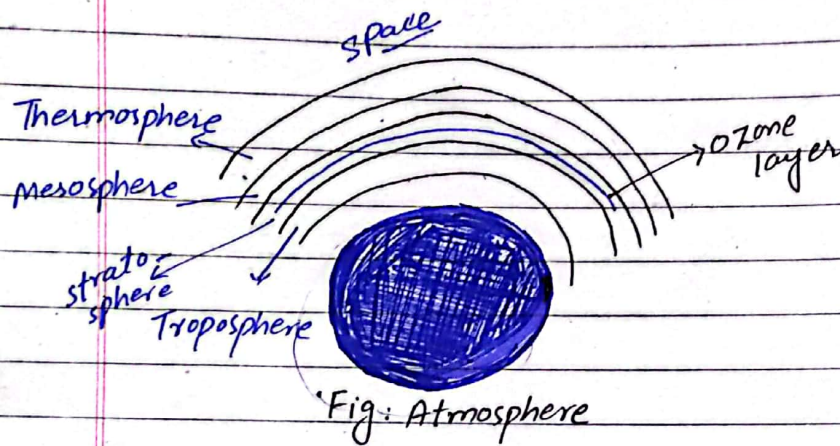
Atmosphere as a blanket of the earth.

Atmosphere is composed of / contains four layers around the earth, that are protecting the surface of the earth from harmful gases and radiations in one way or another. For instance, Troposphere, the 1st layer of atmosphere is protecting the earth through the process of Green House Effect. If this

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process does not take place, Earth becomes so cold that no life form can exist. Similarly, Stratosphere containing ozone layer is protecting the earth from harmful ultraviolet radiations. These radiations if reach the earth can cause skin cancer and many other diseases. Therefore, it would be right to say that Atmosphere is the blanket of the Earth.



(d) Define

i) Hydrometers:

The instrument which is used to measure the temperature of water is called hydrometer.

iii) Eye wall of cyclone:

~~This is the~~

The intense air surrounding the eye of cyclone is called eye wall of cyclone. It is more intense and severe than eye of cyclone. There is high rain-fall

followed by storm urges in the areas of eye wall of cyclone.

v) Light year

According to International Astronomical Union (IAU), light year refers to the distance traveled by light in one julian year.

(a) population Explosion

Causes of population explosion:

- Early marriages
- Lack of awareness/education
- Poverty (people believe : more hands - more earning)
- Lack of policies implementation

Control measures

- Educate public about impacts of population explosion.
- Encourage family planning
- Make policies or laws to reduce the rate of early marriages in Pakistan.

Q-4 (d)

Define

i) Biofuels:

Such fuels that are generated through biomass are called biofuels. Bio-gas and Bio-diesel are the types of biofuels generated through animal dung and crops wastes.

ii) Adulteration: ~~The~~

The process of adding inferior substances into food, that will compromise the food quality is called adulteration. For example: adding ^{water} ~~milk~~ into milk. Adulteration can be done for earning profit.

iii) Hydrosphere:

The part of Earth which contains water is called hydrosphere. This part of earth contains about 97% sea water and 3% freshwater. The source of 97% of freshwater are glaciers.

iv) Troposphere

Troposphere is the first layer of atmosphere, close to the Earth. It extends about 12-15 km above sea level. This layer contains abundance of gases. Temperature decreases in this layer. Cloud formation takes place here.

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(C) Methods of Solid waste management

Following methods are used for solid waste management:

- Open-dumping - Discouraged internationally
- Land-fill
- Incineration