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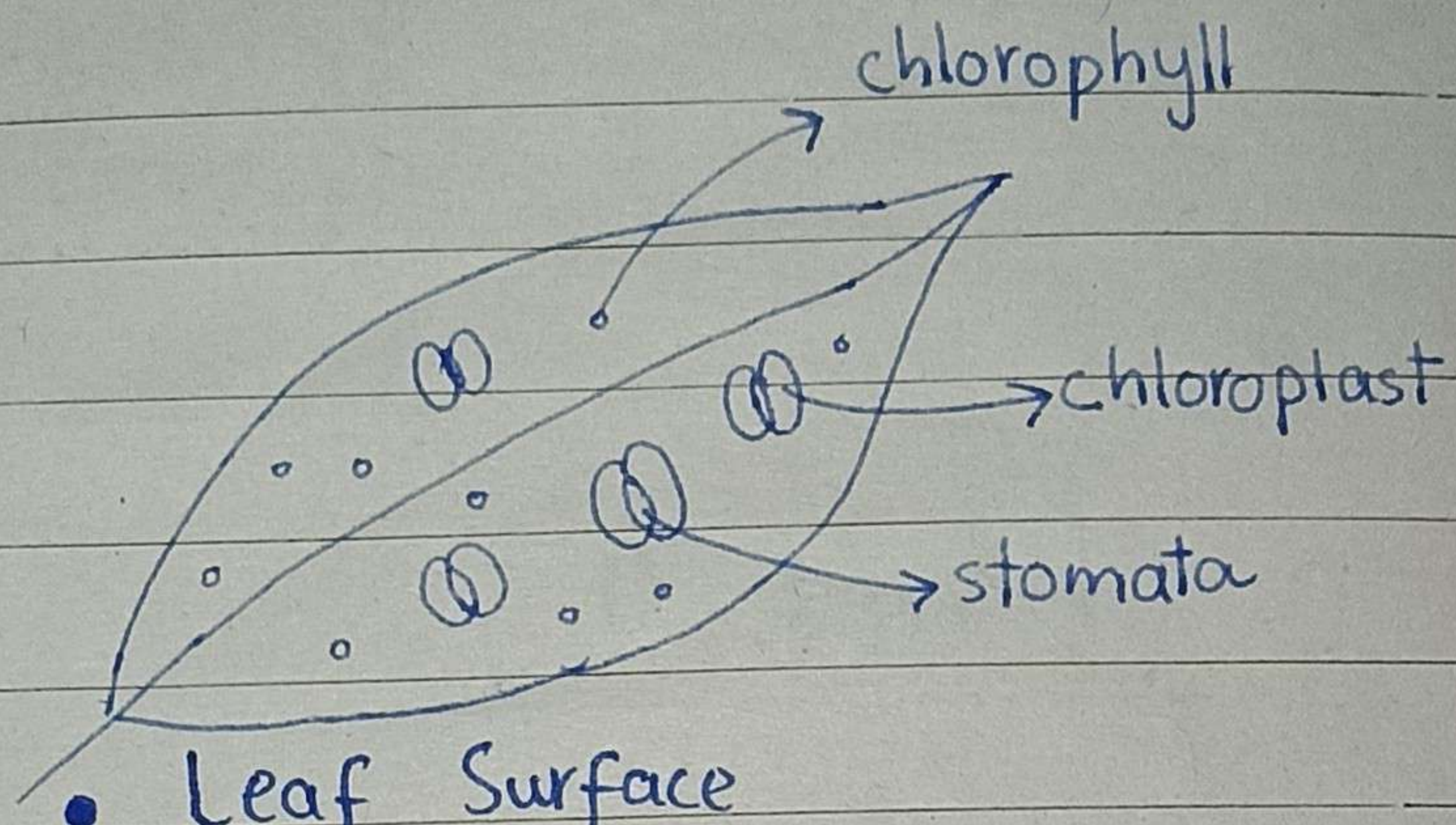
Part-IISection-1Question # 04

~ a ~

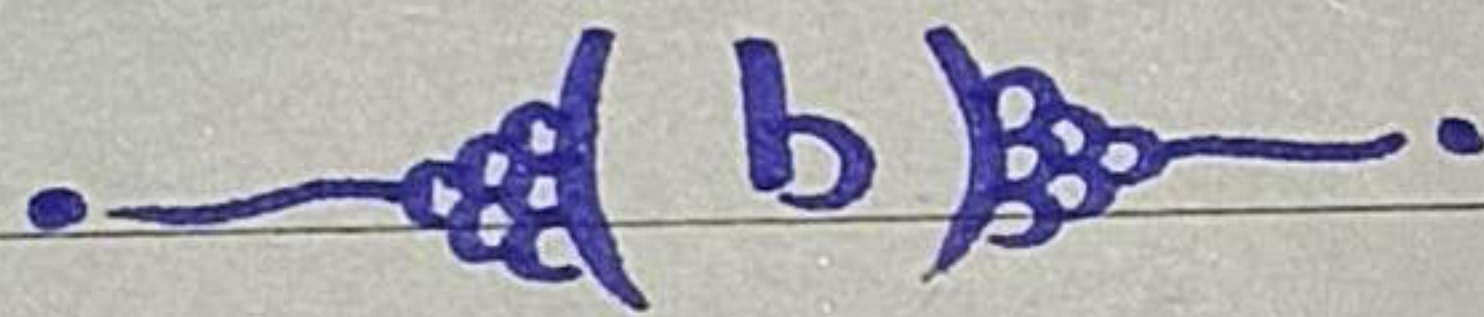
Chlorophyll

Plant kingdom is the group of organisms which are able to make their own food by utilizing sunlight. "Chlorophyll" is the pigment in Plant kingdom which is used to absorb light and give the green colour to plants.

Chlorophylls are present in chloroplast which absorbs the red and blue wavelengths of sunlight and helps in photosynthesis to make their own food.



• Leaf Surface
 → chlorophyll is responsible for the green colour of plants.



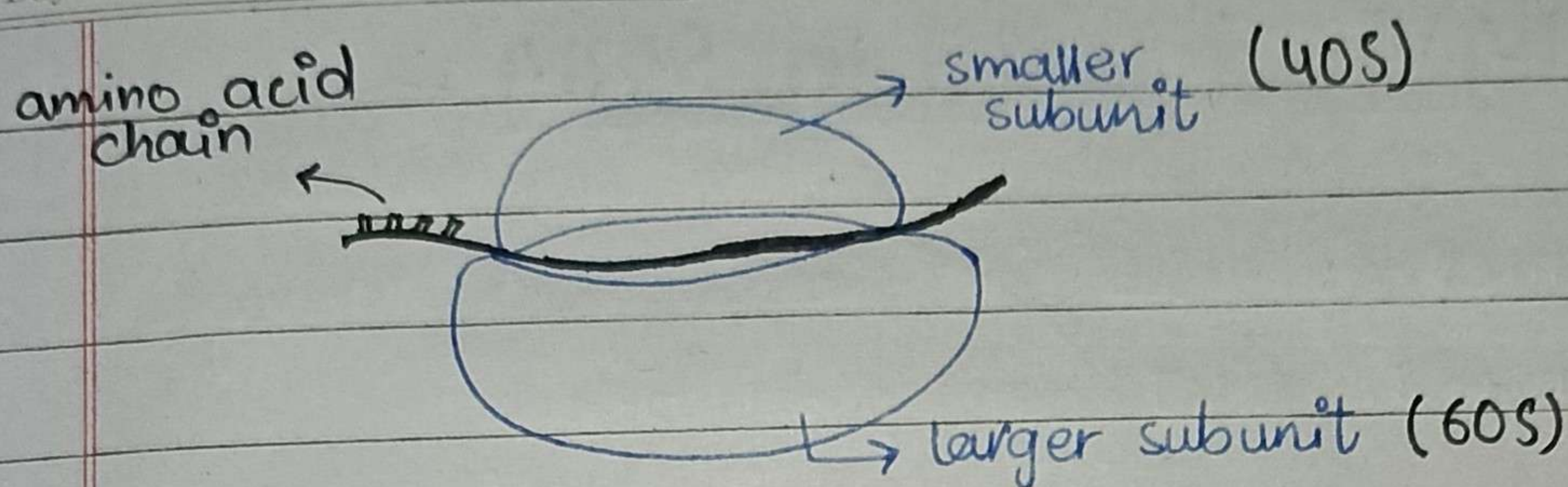
Ribosomes:-

Ribosomes are organelles found in the cell cytoplasm which are responsible for the protein synthesis.

George Emile Palade discovered ribosomes in the cell in **1950s**.

Role of Ribosomes:-

Ribosomes are also known as protein factory of cell. Its main role is to produce protein by using amino acid chains coming from Endoplasmic reticulum.



Parts of ribosomes:-

There are two parts of ribosomes : smaller subunit and larger subunit. The ribosomes present in prokaryotes is **70s** and in eukaryotes is **80s**.

→ S is the Svedburg unit used to represent the size of ribosomal subunits.

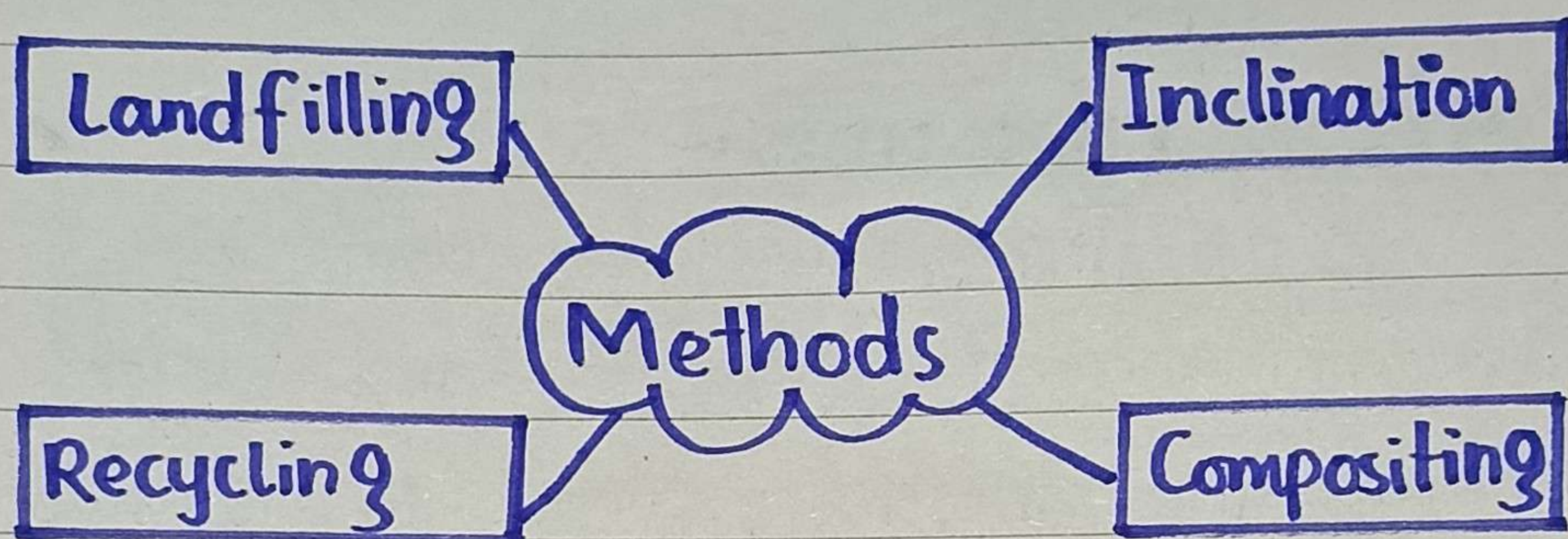


Solid Waste Management:-

Solid Waste Management is the technique to reduce the detrimental effects of disposal waste. This technique is used to minimize the carcinogenic effects by using different methods.

Methods used in SWM :-

There are various methods used in Solid Waste Management that are given below:



Landfilling :- Landfilling is the process of dumping waste material into the ground which separates the waste material from the environment.

Inclination :-

Inclination is the process of burning waste material in the open area to prevent the soil from long-term effects.

Recycling :- Recycling is the most important method of solid waste management. It involves to change the waste product into any other usable product.

Compositing:- Compositing is the process of using biological material e.g: bacteria to remove the disposal waste. Biological organisms consumes the biodegradable product and clean the environment.



Define the terms:

i) **Biofuel**:-

Biofuel is the type of fuel which is made from the organic organisms such as biomass, crops, organic wastes and from other organisms.

examples: ether, ethanol etc.

ii) **Adulteration**:-

Adulteration is the process of contaminating food by adding several contaminants in food with own will.

Mostly sellers adulterated food by adding

- water in milk
- dust in wheat
- pebbles in rice and grains.

(iii) Hydrosphere:-

Hydrosphere is the part of environment and surface area which is covered by the water.

Hydro means $\rightarrow$ "water"

Sphere means $\rightarrow$ "surface / area"

Mostly **97%** of the surface area of Earth is covered with water in the forms of lakes, rivers, streams, glaciers, and oceans and fresh water.

iv) Troposphere:-

Troposphere is the part of atmosphere ranging from surface area of Earth to about **20 km** upward.

- Troposphere is the first layer of atmosphere.
- Mostly events like, cloud formation, precipitation, and planes are flying in this region.

Ozone layer is present in this sphere.

v) Isotopes

Isotopes are the possible forms of elements having same number of protons but different numbers of neutrons and electrons.

Examples:

There are three isotopes of Hydrogen : Protium, deuterium, tritium
 H^1 , H^2 , H^3

Question No # 05

~~Q. 5~~

Population:-

Population is the number of people living in a particular place. Pakistan is the fifth most populous country in the world. The population of Pakistan increases rapidly despite many economic and socio-political challenges. The population of Pakistan has reached to **244 million**.

Causes of Population Explosion

There are many prominent causes of population explosion which are not taking heed of anyone. Some causes of population explosion are

Lack of education and awareness, Unemployment, religious misinterpretations, early marriages, non-effective policies of government, and the lack of Political will.

Measures to control Population:-

It is a very crucial to take step for controlling population of Pakistan. Due to this, there should be a facilities of education especially in rural area. There is a need of providing knowledge about controlling birth rate by using contraceptive material. Population rate can be controlled by launching awareness campaigns, reducing Unemployment and taking reduce birth rate policies at ground levels.

• ~~ab~~

Remote Sensing:-

Remote sensing is the technique of studying the process of what occurring at the Earth's surface and

in environment from the large distance. Remote sensing is mostly used to know about the aircrafts and satellites in the atmosphere.

There are various types of remote sensing which are used in different processes such as :

- electrospectral
- RADAR
- In SAR

Role of GIS in environmental Science:-

Geographic Information System (GIS) is the computer science which is used to analyze, detect and diagnose the geographic area related to the Earth's surface.

GIS used in environmental science to analyse the natural disasters, clouds, agricultural setups and mapping on the Earth's surface.

It functions in **three-dimensional mechanisms.**

~(C)~

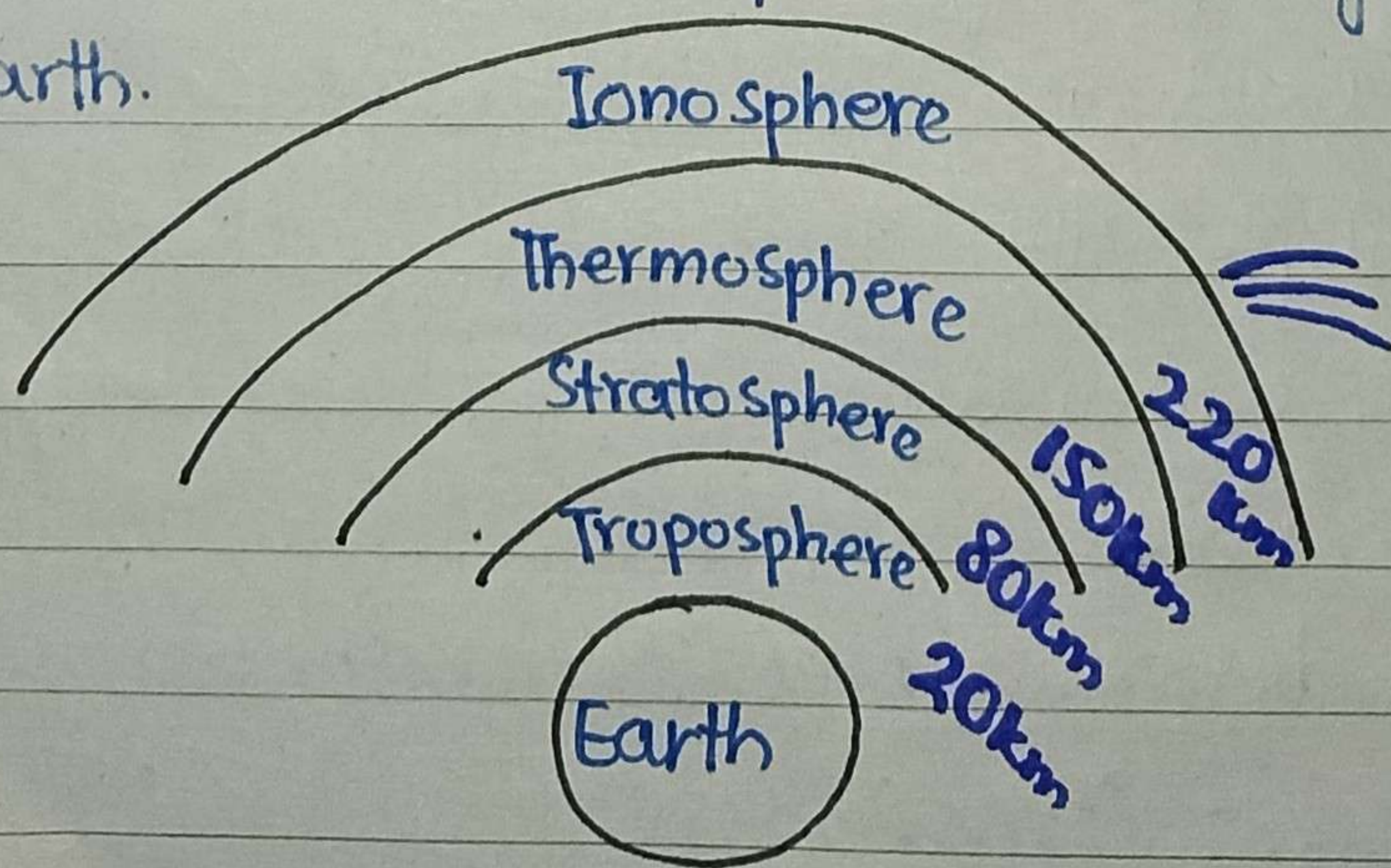
Atmosphere is the blanket of Earth :-

Atmosphere is the part of surface area that is upward to the Earth's surface. There are many gases, dust, particles are present in atmosphere.

"Atmosphere is the blanket of Earth" means that it wrapped the Earth in different layers that protect the Earth and maintain the temperature.

Layers of Atmosphere :-

There are four layers of atmosphere which are ~~for~~ responsible of cleaning the Earth from ultra-violet radiations of sun coming towards Earth.



Ozone layer is present in the Stratosphere which protects the Earth from blocking the UV rays.

Section-2

Question No #7

~~• (a) •~~

Diameter = $d = 14 \text{ cm}$
of sphere

Volume of sphere = ?

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

$$\text{Volume of sphere} = \frac{4}{3} \pi r^3$$

$$= \frac{4}{3} \pi r^3$$

$$= \frac{4}{3} \pi \left(\frac{d}{2}\right)^3$$

$$d = 2r$$

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

$$= \frac{4}{3} \pi \left(\frac{d^3}{8}\right)$$

$$= \frac{\pi d^3}{6}$$

$$= \frac{22 \times (14)^3}{7 \times 6}$$

$$= \frac{22 \times 2744}{7 \times 6}$$

Day: _____

Date: _____

$$V = \frac{392 \times 11}{3}$$

$$= \frac{4312}{3} = 1437.3$$

$$V = 1437.3 \text{ cm}$$

The volume of the sphere is
1437.3 cm.

~~Ex (b)~~

Five friends' total saving = 25,000 Rs.

$$\text{Ratio} = 1:2:3:4:5$$

$$\begin{aligned} \text{Total} &= 1+2+3+4+5 \\ &= 15 \end{aligned}$$

$$\text{Smallest share} = ??$$

$$\text{A's share} = \frac{25000}{15} \times 1 = 1666.6 \text{ Rs}$$

$$\text{B's Share} = \frac{25000}{15} \times 2 = 3333.3 \text{ Rs}$$

$$\text{C's Share} = \frac{25000}{15} \times 3 = 5000 \text{ Rs}$$

$$\text{D's share} = \frac{25000}{15} \times 4 = 6666.6 \text{ Rs}$$

$$\text{E's Share} = \frac{25000}{15} \times 5 = 8333.3 \text{ Rs}$$

Friend A has the smallest share
in saving is **1666.6 Rs.**

~~Q(C)~~

Complete the Series:

(i) 2, 6, 18, 54, 162, 486, 1458

(ii) 3, 5, 7, 11, 13, 17

~~Q(D)~~

Triangle with sides =

A = 5 cm, B = 12 cm, C = 13 cm

Find angles = ??

Let :-

$$A = 90^\circ$$

$$= A + A + A$$

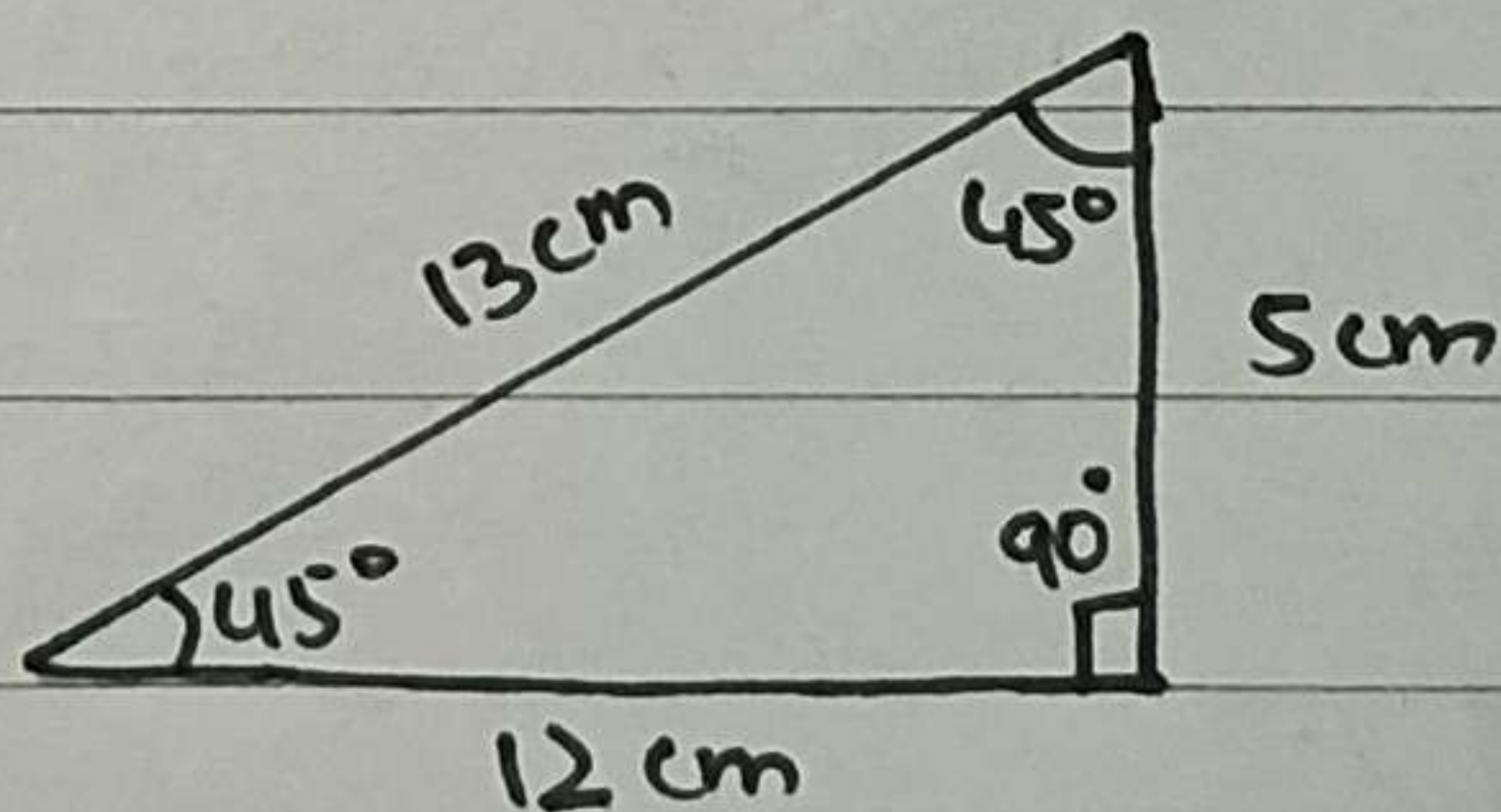
$$= 90 + 2A$$

$$2A = 90$$

$$A = 90/2$$

$$A = 45^\circ$$

The angles of triangle are 90° ,
 45° , 45° .



Question # 6

— (C) —

bicycle cover distance $= S = 36 \text{ km}$

Speed $= v = 18 \text{ km/h}$

starting at $= 1 \text{ pm}$

$$S = \frac{v}{t}$$

$$t = \frac{v}{S}$$

$$= \frac{36 \text{ km}}{18 \text{ km/h}} = t = 2 \text{ hr}$$

starting from $= 1 \text{ pm}$

Time $= 2 \text{ hr}$

$$= 1 + 2$$

$$= 3 \text{ pm}$$

bicycler reach at $= 3 \text{ pm}$

(d)

Unscramble these
terms.

i) STSTAICTS

STATISTICS

ii) LGEBMAR

GAMBLER.
