

LMS: 41518

Day: \_\_\_\_\_

Batch: 412

GSA: M-ZEESHAN SHARAF

Date: \_\_\_\_\_

QNO: 3

(a)

### Global warming

Global warming is the increase of Global temperature. It occurs ~~due~~ due to the increase in the concentration of greenhouse gases. They are trapping heat of sun and increasing earth's temperature. The normal phenomena of greenhouse effect is necessary but the increased than limit cause harmful impact.

How global warming can be reversed

### Plantation and Reforestation

The main absorber of greenhouse gases, are the plants. They are carbon sinks. They absorb carbon dioxide from the atmosphere and according to IPCC 65% of global warming is caused by carbon dioxide. Thus reforestation can reduce greenhouse gases and ultimately lead to reversal of global warming.

Reducing the use of fossil fuels

Global warming can be reversed by reducing the use of fossil fuels.

The coal, gas, and petroleum oils when burn in industries, households and in vehicals they produce green house gases.

Thus to control global warming or to reverse it fossil fuels burning must be reduced.

Shift to Renewable energy.

According IPCC 35 percent of global emission is contributed by energy production sector. Thus shift on solar, wind, hydal, and nuclear energy can reverse the global warming.

Formation of artifical lakes to increase colling effect.

Water bodies produces the colling effect due to process of evaporation. Thus formation of artifical lakes in cities can help to reduce the global temperature. Thus water bodies can reverse the global warming.

Ensuring proper solid waste managements:

Solid waste produce gases like carbon-monoxide, carbon-di-oxide, methane, and Sulphur oxides. They are contributing to global warming. Thus, ensuring proper solid waste management can ~~reverse~~ reverse the global warming.

(b)

## Ceramics

Ceramics are the solid material which is produced by the clay with the addition of ceramic powder. Then the clay with ceramic powder allowed to mould itself in specific structures. These dry and hard blocks are called ceramic blocks.

## Properties:

- ⇒ Ceramics are water proof.
- ⇒ They are hard and durable material.
- ⇒ They have high melting and boiling

## Points.

- ⇒ They are electrically insulators.
- ⇒ They are resistant to weather and

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chemical corrosion.  
⇒ They are heat resistance act as  
insulators.

Applications of ceramics.  
⇒ They are used in tiles and  
ceramics ware making.

⇒ They are used in electronic as  
an insulators

⇒ They are used in construction for  
tiles making.

⇒ They are used in dental practices  
as well as synthetic bones making.

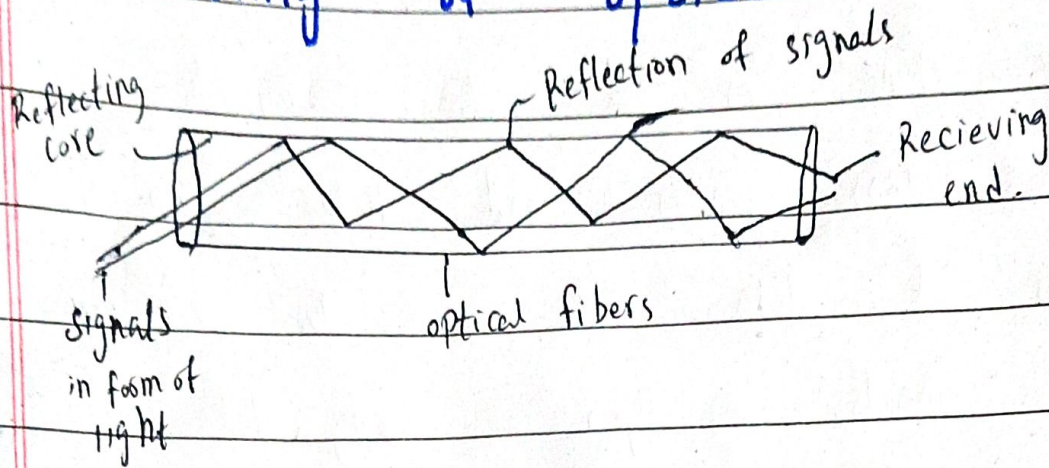
⇒ They are used in bullet proof  
jackets making.

(C)

### Optical Fibers:

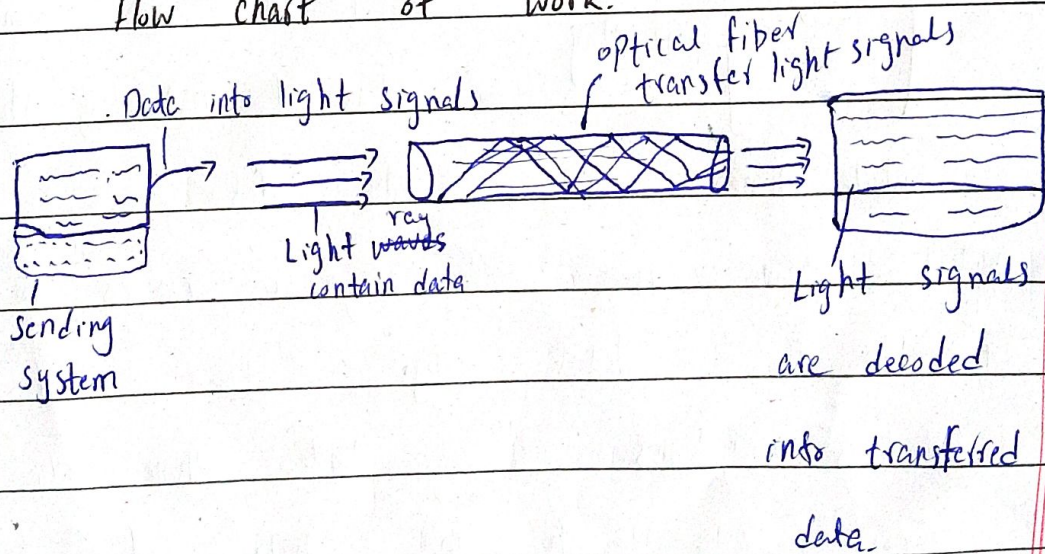
Optical fibers are small glass tubes,  
they are thin like hair of  
human. They are used in telecommunication  
to send signals in the form of  
light waves. They send signals at  
very high speed without losing  
the information.

# Working of optical fibers



The signals are converted into light form and enter in optical fibers. The inner core of fibers reflect the light and light keep passing in the form of reflecting waves. The light is received on the receiving end and converted into the respected data.

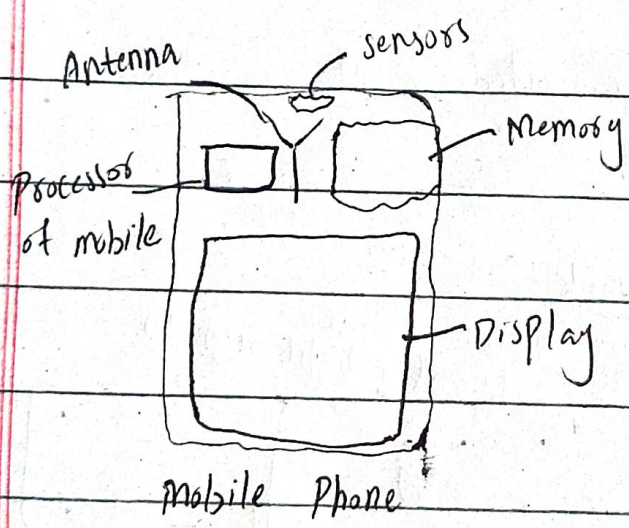
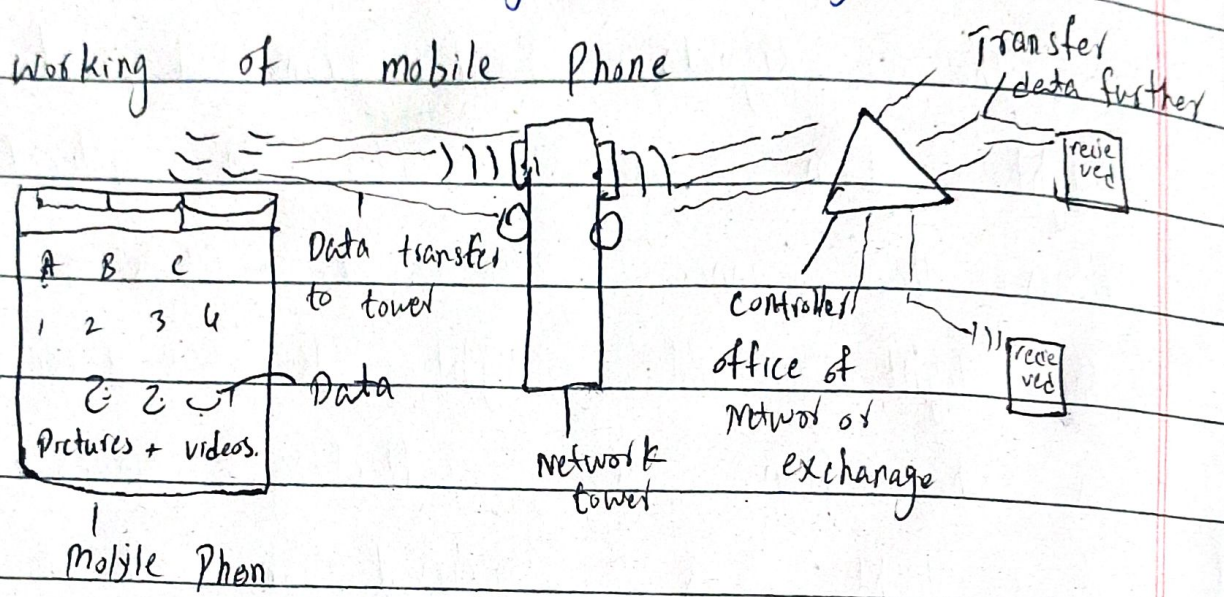
## Flow chart of work.



# Mobile Phone

Mobile phone is a device which use wireless waves and helps in transfer of data. Data can be voice videos, emails, messages or any data.

## Working of mobile Phone



Sensors and Antenna receive or send data. Processor stores it and memory store it. Display shows the data.

Mobile Phone uses electromagnetic waves to transfer the data by tower and satellites systems. The mobile phone also process data with the help of user controlled processors.

(d)

Food Additives are materials that have no nutritional values but added in food to enhance the taste and colour of foods.

examples: Food colours, Flavouring agents

Food preservatives:

They are compounds that are used to stop the contamination of food and increasing the shelf life of food. food preservatives are following.

Example. vinegar, salts, Benzoates.

Food Adulteration.

Food Adulteration is addition of chemical or other materials in food intentionally. They are corrupt practices to increase the quantity of food.

example - water in milk, Artificial Pulp in juices,

Food contamination:

It is the process of addition of materials other than food. They are added unintentionally. For example:- Addition of dust by air, Addition of water by rain, Addition of leaves or small grass in wheat.

Q No : 4 (a)

Role of heart and blood vessels in circulation.

Heart is strong muscular organ which is vital due to its work. It pumps the blood throughout the body and maintain circulation.

Blood vessels.

Blood vessels are the passages of blood in body. Three types of blood vessels.

capillaries.

They are junctions between arteries and veins they are involved in exchange of oxygenated and deoxygenated blood and food materials.

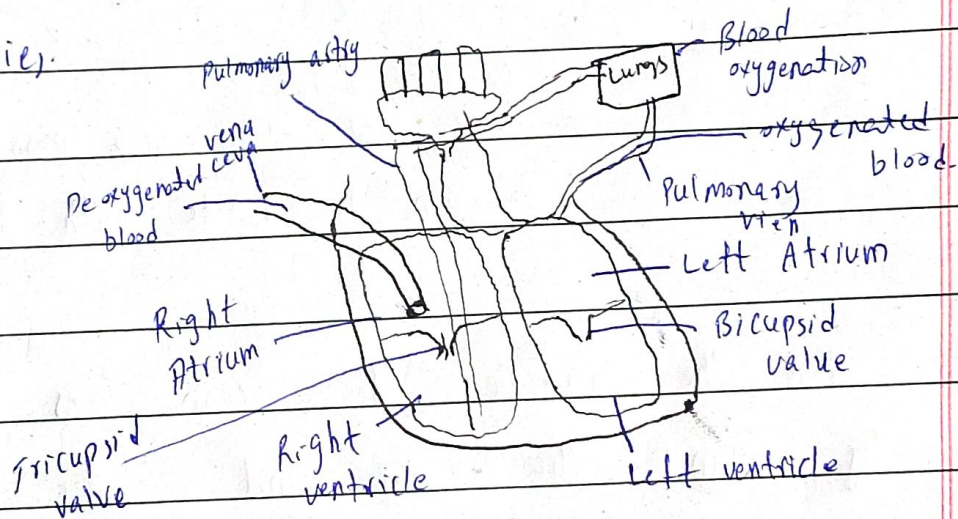
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**Veins:** These are blood vessels that take blood to the heart from body they contains deoxygenated blood except Pulmonary veins.

**Arteries:** They carries oxygenated blood from heart to body except Pulmonary

arteries.



Deoxygenated Blood from body by vena cave → Right Atrium →

Tricuspid valve → Right ventricle → Pump → Pulmonary Artery → Lungs →

gaseous exchange → Pulm vein → Left atrium → Bicuspid valve

→ Left ventricle → Aortic Arch → Body.

(b)

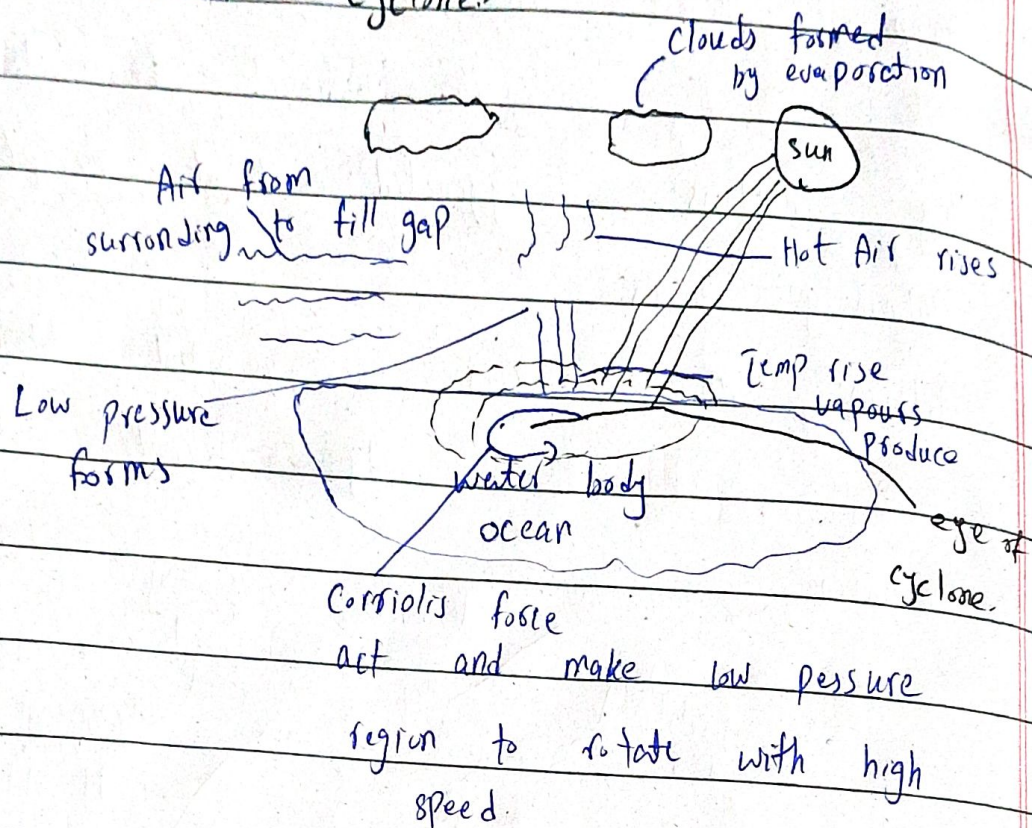
### Cyclones:

Cyclone is kind of storm which produced in larger water bodies by increase in temperature, the Coriolis force of earth and change in air pressure initiate its production.

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## Formation of cyclone:



When the surface of ocean is heated by sun the air and water vapours rise upward. So low pressure formed at that point. Cool air from sides came to fill the gap. The process keep occurring the pressure become more low. The rotation force of earth start rotating water in circular motion. Thus the self renewing cycle of huge rotated water formed with very low pressure. This way a cyclone is formed.

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(C)

### Function of carbohydrates.

- ⇒ They are main source of energy in the body.
- ⇒ Involved in the cellular respiration
- ⇒ Helps to store protein for amino acid pools.
- ⇒ Improves function of brain and heart.

### Functions of Protein.

- ⇒ Involved in energy production.
- ⇒ Improves the metabolism of body.
- ⇒ Enhance amino Acid pool of body.
- ⇒ Maintains immune system.
- ⇒ Build muscles, enzymes and hormones.

### Functions of fats:

- ⇒ concentrated source of energy.
- ⇒ involved in transportation of minerals in body.
- ⇒ Helps in absorption of vitamins.
- ⇒ Formation of different neurotransmitters.
- ⇒ Insulation of Body organs
- ⇒ Maintains structure of cell membrane

Day: \_\_\_\_\_

### Calcium:

- ⇒ Involved in muscles movement.
- ⇒ Formation of bones and making them strong.
- ⇒ Teeth formation.
- ⇒ Essential for blood clotting.

### Iron's function

- ⇒ Key component of hemoglobin.
- ⇒ vital for enzyme function in metabolism.
- ⇒ Maintains blood levels prevents anemia.

(d)

### Remote sensing:

Remote sensing is evaluation of a specific land patch with the help of satellites, drones and aircrafts without directly going there.

### How remote sensing can be employed for environmental purposes

Remote sensing can be used for environmental purpose to find out environmental condition of areas.

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Sensing of forest cover:

Remote sensing can be used to evaluate the amount of forests present in the area. According to forest data environment conditions can be evaluated.

Sensing the water bodies.

Water bodies are key component of environment. Thus remote sensing can be used to monitor water bodies of an area and evaluation of environment whether these bodies are drying or increasing.

Monitoring Pollution level.

Remote sensing can also be used to monitor the air pollution and wastes of an area. The smog, smoke, and solid waste can be monitored by the remote sensing.

Monitoring of urbanization:

Remote sensing can be used to monitor urbanization. How much area of agricultural or forest land

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is covered by urbanization.

Disaster management:

Remote sensing can be used to monitor cyclones, earthquakes, and landslides and help in initiation of targeted relief planning.

Monitoring and observation of Biodiversity and its habitat.

Remote sensing can be used to monitor the desertification, deforestation and habitat loss of biodiversity. so it can help to conserve the biodiversity.

Q No: 7

(A)

Let the one number =  $x$

Let the second number =  $y$ .

$$40\% (x) = \frac{2}{3} y$$

$$\frac{40}{100} (x)$$

$$\frac{x}{5} = \frac{2}{3} y$$

$$\frac{x}{5} = \frac{y}{3} \quad \text{cross multiply}$$

$$\frac{3x}{3 \times 5} = \frac{5y}{3 \times 3} \Rightarrow \frac{x}{5} = \frac{5}{3} = \boxed{x:y = 5:3} \quad \text{Answer}$$

(B)

Let cost price is =  $x$ Cost price of 17 bulls =  $17x$ 

Sold price = 720

Loss = cost price - sold price.

 $\therefore$  Loss = cost price of 5 bulls.Loss =  $5x$ 

Putting values.

$$5x = 17x - 720$$

Add 720 both side and subtract  $+5x$  both sides

$$-5x + 720 + 5x = 17x - 720 + 720 - 5x$$

$$17x - 5x = 720$$

$$12x = 720$$

$$\boxed{x = 60}$$

Thus the cost price of one bull is 60

(C)

Let the age of son =  $x$ Father age present =  $x + 24$ 

After two years

$$\text{Father age (F)} + 2 = x + 24 + 2$$

$$F + 2 = x + 26$$

Son's age =  $x$ 

$$= x + 2$$

Also mentioned

$$\text{Father age} = 2x$$

$$x+26 = 2(x+2)$$

$$x+26 = 2x+4$$

$$2x-x = 26-4$$

$$x = 22$$

Thus the age of son is 22 years.

(D)

Rashid's speed = 32 pages in 6 hours

Kamran's speed = 40 pages in 5 hours

Work done in 3 hours.

$$\text{Rashid} = \frac{32}{6} \times 3 = \frac{16}{3} \text{ pages in 3 hours}$$

$$\text{Kamran} = \frac{40}{5} \times 3 = 8 \times 3 = 24 \text{ pages in 3 hours}$$

Working together on two computers in 3 hours.

Kamran + Rashid.

$$\text{Total speed} = \frac{16}{3} + \frac{24}{3} = \frac{40}{3} \text{ pages per hour.}$$

Time for 110 pages

$$\text{Time} = \frac{110 \times 3}{40} = \frac{330}{40} = 8.25 \text{ hours}$$

So Both will write 110 pages in 8.25

hours collectively.

$$\begin{array}{r} 8.25 \\ 40 \overline{) 330} \\ \underline{320} \\ 100 \\ 80 \\ \underline{20} \\ 200 \\ \underline{200} \\ 0 \end{array}$$

Q No 8

(A)

As A is right to B

E is left to C

E is right to A

B is right to D

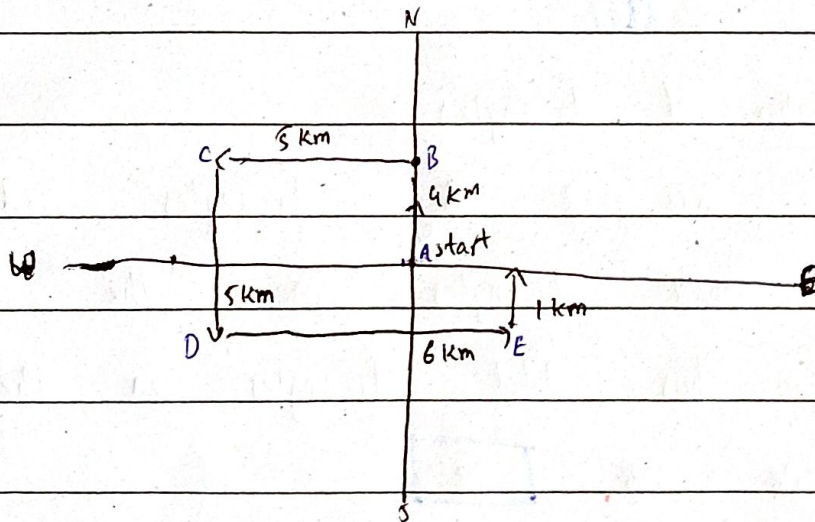
Thus

D B A E C According to this

sequence of houses in the row

the house in middle is A Answer.

(B)



(i) How many kilometers from start point

Because Distance  $D \rightarrow E = 6 \text{ km}$  and  $B \rightarrow C = 5 \text{ km}$ So Difference =  $6 - 5 \text{ km} =$  1 km

1 km away from start point.

(ii) in which direction running. Before stop = North(iii) To reach start point move toward West

Day: \_\_\_\_\_

(C)

THRSI  $\Rightarrow$  SHIRT

AOTL  $\Rightarrow$  COAT

EOUBSL  $\Rightarrow$  BLOUSE

KTRIS  $\Rightarrow$  SKIRT

RETAEWS  $\Rightarrow$  SWEATER

So All four SHIRT, COAT, BLOUSE and SWEATER are for upper body Thus

SKIRT is for lower body which is

odd

SKIRT  $\rightarrow$  KTRIS

(Q)

Number of triangles.

There are 8 Big triangles and

10 small triangles in the

shape. Thus total triangles in the

shape are

18