

Section I

Q NO 2

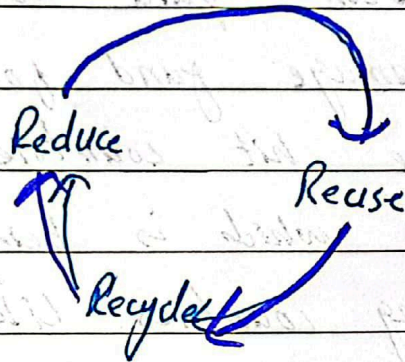
a) Cop28 summit is held in United Arab Emirates in which UAE pledged to establish world biggest solar park. Moreover, special atten has been paid towards loss and damage fund for most climate change hit countries. The main hurdle which is being faced by developing countries like Pakistan due to heavy flood and rainfall, is financial crisis. Developed countries pledged to establish loss and damage fund.

b) Solid Waste Management:

Solid waste management is a process in which waste products of factories and industries are dumped properly to escape from the hazards of pollution. The methods which are used

for proper management of waste are

- i) Landfill
- ii) Incineration
- iii) 3R (reduce, reuse, recycle)



Landfill

It is a process in which waste of industries is dumped under ground.

Incineration

In this process whole waste product is burnt and by collecting in deserted place.

Reused:

Some waste is made able to use again and again for using multiple times.

c) Balanced diet

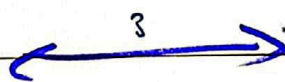
Balanced diet is that food which contains all the nutrients essential for good health.

D) Three Renewable Energy Resources under CPEC

A - Construction of new dams

B - Very large solar park in Bahawalpur.

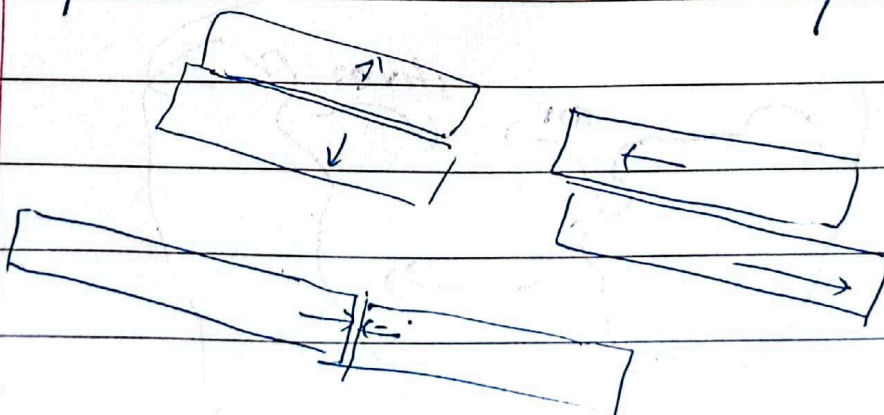
C - Wind power plants in desert areas.



Q NO 4

a) Earthquake

Sudden release of energy from earth's tectonic plates is called earthquake.



Tsunami:

Tsunami occurs in the sea after earthquake due to release of large amount of energy. A recent example of Tsunami can be seen in Japan after earthquake.

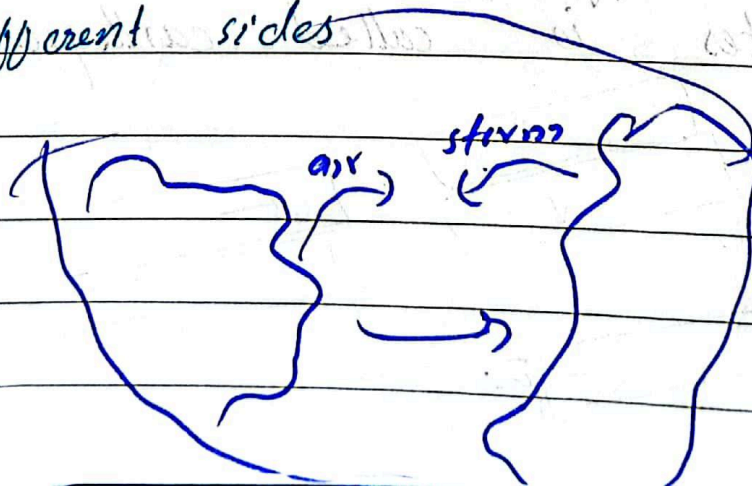
b)

Coriolis Force:

Coriolis force is that force which moves bodies in circular path with high speed like hurricanes in oceans. Hu

Hurricanes:

Hurricanes come in ocean due to heavy air storm which causes air to swirl from different sides.



c) Solar and Lunar Eclipse

Solar Eclipse

i) In solar eclipse moon comes between sun and earth.

ii) It occurs once in a year.

iii) Occurs during full ^{or} partial moon.

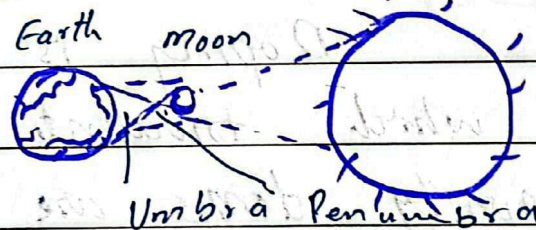
Lunar Eclipse

i) In lunar eclipse earth comes between moon and sun.

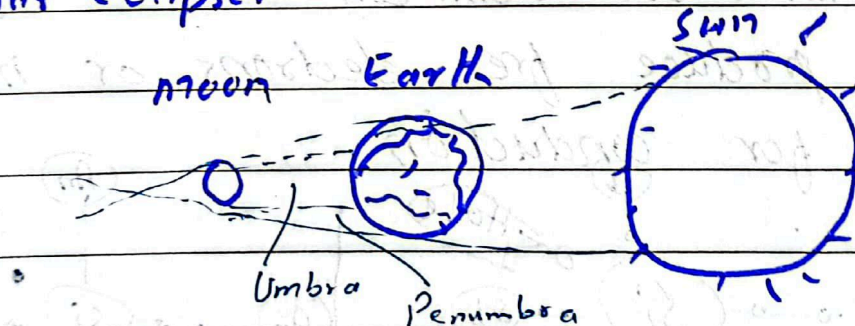
ii) It occurs very often.

iii) It occurs in full moon.

Solar Eclipse:



Lunar Eclipse:



D)

Semiconductors:

These are two types of semiconductors

a) Intrinsic Semiconductor

b) Extrinsic Semiconductor

a) Intrinsic Semiconductors:

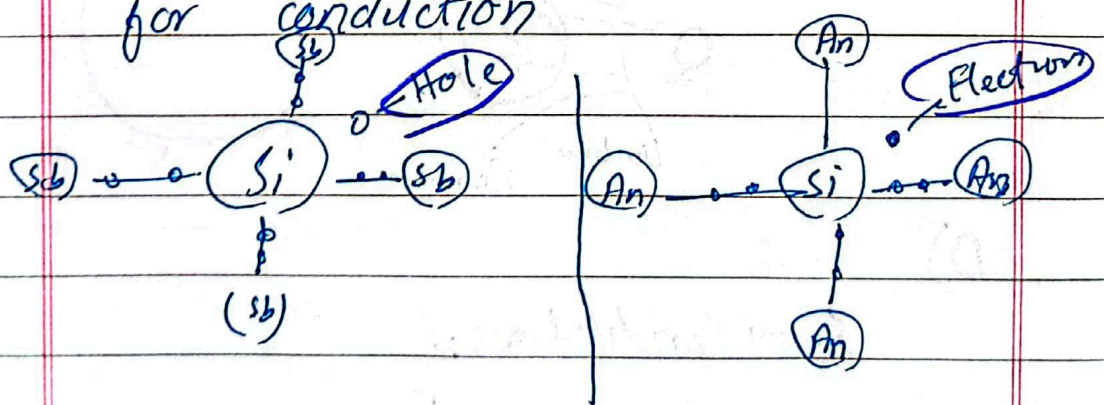
The semiconductors which are found in pure form are called intrinsic semiconductor.

b) Extrinsic Semiconductors:

The semiconductor which is not found in pure form is called extrinsic semiconductor.

Doping:

Doping is a process in which trivalent or pentavalent impurity atoms are added in intrinsic semiconductor to produce free electrons or holes for conduction.



Q No 5

a)

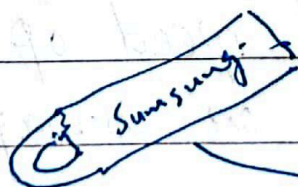
Ram	Rom
i) It is Random access memory.	i) It is read only memory.
ii) It is non-volatile memory	ii) It is volatile memory.
iii) It is permanent memory	iii) It is temporary

Nibble:

Four bits make one byte and two bytes make one nibble so 1 Nibble = 2 bytes = 8 bits

USB:

USB is universal serial bus. It is a type of memory is moveable that can be used to transfer data from one place to another easily.



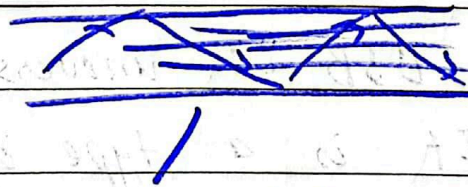
USB

b) Artificial Intelligence

It has revolutionized the world by various benefits for human. It has been used in agriculture, medicine, defence and other useful purposes.

c) Optical Fibre:

Optical fibre is a cable like bundle of very light bright wires which are used to transfer data in a quick and efficient way and has made human work easier.



Optical Fibre

d)

Optical Speed of Satellites

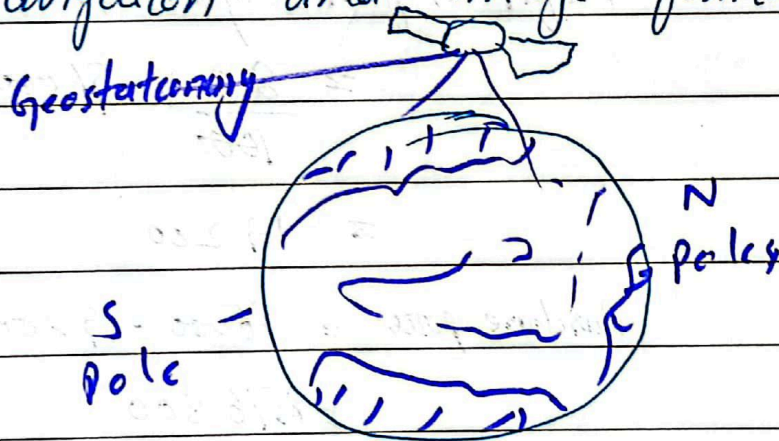
The optical speed of satellites is 7.9 km/s on average.

There are two kinds of satellites

- a) Geo-stationary Satellites
- b) Polar Satellites

Geostationary Satellites:

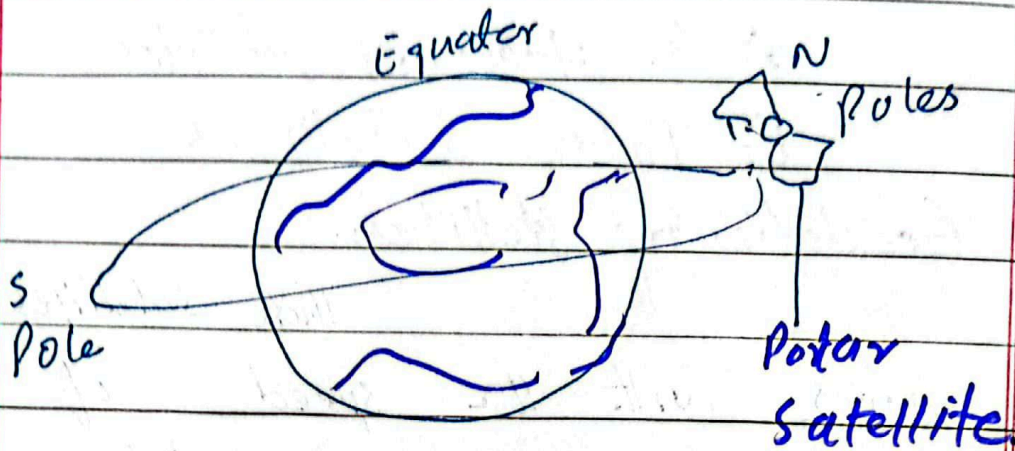
These satellites moves with the speed of earth and remains stationary with respect to earth. That's why they are called geostationary satellites. These satellites are used for transfer of information, navigation and image formations.



b) Polar Satellites:

Polar Satellites moves along the poles of earth and provides info- for that region and navigate

that area.



Q No 7

a)

sale price of each

$$10 \text{ scooty} = \text{Rs } 96000$$

$$\text{Profit on first scooty} = 20\% \times 96000$$

$$= \frac{20}{100} \times 96000$$

$$= 19200$$

$$\text{Purchase price} = 96000 - 19200$$

$$= \text{Rs } 76800$$

$$\text{Loss on second} = 19200$$

$$= \frac{\text{loss}}{\text{s.p}} \times 100$$

$$= \frac{19200}{96000} \times 100$$

$$\text{Loss} = 2\%$$

$$\begin{array}{r} 960 \\ 20 \\ \hline 000 \\ 19200 \\ \hline 19200 \end{array}$$

$$\begin{array}{r} 15 \\ 96000 \\ 19200 \\ \hline 76800 \end{array}$$

$$\begin{array}{r} 2 \\ 96 \overline{) 192} \\ \underline{192} \\ 0 \end{array}$$

b)

Men: hour: Day
 \uparrow 195 : 10 : 20
 \downarrow x : 13 : 15

$$\frac{x}{195} = \frac{10}{13} \times \frac{20}{15}$$

$$x = \frac{2 \times 20}{13 \times 3} \times \frac{195}{1}$$

$$= 2 \times 100$$

$$x = 200$$

Hence 200 men are required to finish job in 15 days daily 13 hours work.

c)

$$A = \{a, e, i, o, u\}$$

$$U = \{a, b, c, \dots, z\}$$

Find $A' = ?$ sol

$$A' = U - A$$

$$= \{a, b, c, \dots, z\} - \{a, e, i, o, u\}$$

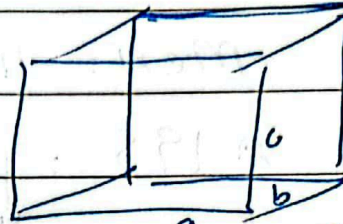
$$A' = \{b, c, d, f, g, h, j, k, l, m, n, p, r, s, t, v, w, x, y, z\}$$

Ans

Y12

d)

Volume of square
Pyramid = 372 cm^3
height = 3 cm



square pyramid

Perimeter of base = ?

$$\text{length of one side} = \sqrt{372}$$

$$= 19.0 \text{ cm}$$

Hence Perimeter of

$$\text{Base} = 4 \times l$$

$$= 4 \times 19$$

$$\text{Perimeter of Base} = 76 \text{ cm}$$

		19.0	
7		$\overline{372}$	
		1	
		272	
		261	
		110	

