

DIFFERENCE BETWEEN RAM AND ROM :

RAM :- (RANDOM ACCESS MEMORY)

It is the part of Internal Memory. It received its name from the action. RAM have directly access to memory cell.

It has temporary storage means that data only remains when the machine is running. when the machine is turned off the data is lost.

The processor can easily read and write in RAM faster than any memory storage in computer. It has volatile memory and made up of small chip.

ROM : (READ-ONLY-MEMORY)

ROM Contains hard wired instruction that computer follow when start up

The storage and data of ROM is permanent and non volatile memory.

ROM can be read by computer but it can't be changed.

Byte :

It stores information and provide patterns to represent alphabets in lower and upper cases, numeric digit.

It can be interpreted by the pattern of number between 0 - 255.

$$8 \text{ bits} = 1 \text{ bytes}$$

Nibble :

Nibble originate from its representing 'half a byte' or a four-bit aggregation

Bits is very important in mini computers called microprocessors.

$$4 \text{ bits} = 1 \text{ Nibble}$$

Date: _____

ii) a GPS (Global Positioning System)

It is a navigation system to determine exact location (2D+3D) anywhere in the world.

This system provide capabilities to military, civil user around the world.

It is the US-based system of satellite.

It consist of Three segments

Space segment

Control segment

User segment.

GIS (Geographic Information System)

It is a computer system for capturing, analyzing, storing geographically referenced information which is data identification according to the location.

It plays an important role in an integrating technology.

Date: _____

Natural Satellite and Artificial Satellite :

A satellite is any object revolves around earth (planet) in a circular path.

Natural Satellite :

Which revolves naturally around the earth.
e.g. moon.

Artificial Satellite :

These are the man-made satellites.
e.g. Geostationary, polar satellite.

Optics :- Study of property of light and its propagation

Optical Fiber

These are the strands of glass which are used to transmit light signals from one point to another in telecommunication

Structure:

Optical fibre has two main parts

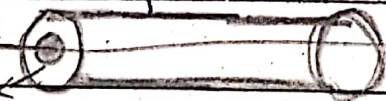
1. Core :-

It is the central part having high density. It is generally made up of glass light propagates mainly along the core of the fibre. Core has high refractive index.

Cladding :-

The core is surrounded by a layer of material called Cladding.

It is made of glass or plastic. It has low density and low refractive index.

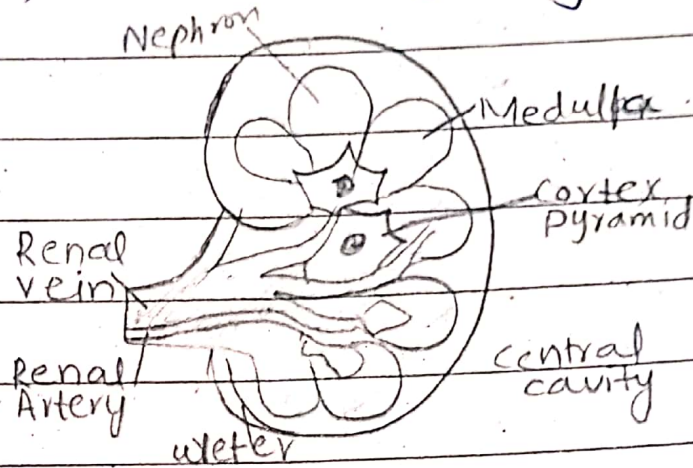


→ Working of Kidney / Krole

Kidney :-

kidneys are dark-red bear shaped organ about 10cm long, each weighing about 270 gram.

Diagrams:



Components :-

Kidney is divided into two regions: renal cortex (outer region) and renal medulla (inner region).

Each kidney is composed of numerous microscopic coiled tubules called nephrons or renal tubules.

Function :-

The kidney and urinary tract filter can eliminate waste substances from blood. Kidney regulate blood pressure, maintain balance of water and help to regulate acid-base balance.

Date: _____

Q: Solid Waste Management:

Def:- The disposal of domestic refuse, commercial and industrial solid waste material is called Solid waste management.

It consist of garbage, waste treatment plants, construction debris and other material.

Issues of Solid Waste Management:

- No proper waste collection system.
- Waste is dumped on streets.
- Different types of waste one not collected separately.
- Open burning is very common.

Solid Waste Management system:

1. Waste Generation
2. Waste handling, processing
3. Waste Collection
4. Waste Sorting
5. Waste Transfer
6. Waste Disposal

Earthquake :-

Intense shaking or trembling of the Earth's surface caused by the sudden forces or movements in its outermost layer are known as an earthquake, a natural disaster.

Formation of Earthquake:

When stress in the crust, the outermost layer of Earth exceeds the strength of rock, it breaks along the lines of weakness either a pre-existing or new fault plane.

1. The starting point of earthquake is hypocenter or focus.
2. The point at Earth's surface directly above the focus is called the epicenter of earthquake.

Causes :-

1. Fault zones
2. Plate tectonics
3. Volcanic activity
4. Human activities

Measurement of Earthquake :-
Since earthquake is exhibited in the form of seismic waves, experts use ~~these~~ ~~seismometers~~ seismometers to record the seismic waves produced by earthquake.

Shallow focus Earthquake :-

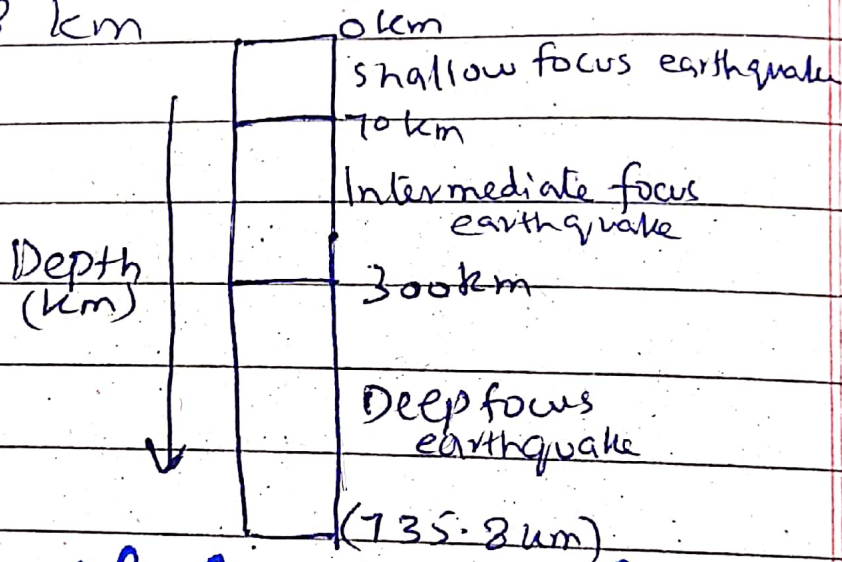
1. Earthquake occur anywhere less than 70 km from the Earth's surface are called shallow focus earthquake.
2. They are called crustal earthquakes.
3. They occur quite frequently and at random.
4. majority of earthquakes are of smaller magnitude. They are often not felt.
5. It poses greater threat at the surface as all energy is directed towards a small area.

Deep focus Earthquake

Earthquake deeper than 70 km from earth's surface are called deep-focus earthquake.

- 2. They are triggered by the collision between plates.
- 3. They have high magnitude.
- 4. It donot cause much damage as focus of earth lies at great depths. ~~and~~

The strongest deep-focus earthquake ever recorded is of magnitude 8.3, where as the deepest earthquake is 735.8 km



Magnitude of Earthquake (Morocco)

→ The magnitude of earth quake in morocco is 6.8 recently occured on ~~18~~ September 2023 which shattered millions of lives and massive devastation occured.

Date: _____

M T W T F S

(Q 6#b)

$$\text{Mean} = \frac{\text{Sum of values}}{\text{Total no. of values}}$$

$$\text{mean} = \frac{10 + 30 + y + 50}{4} = 50$$

$$\text{Mean} = \frac{90 + y}{4} = 50$$

$$= 90 + y = 50 \times 4$$

$$= 90 + y = 200$$

$$y = \frac{200}{90}$$

$$\begin{array}{r} 2 \\ 9 \overline{) 20} \\ \underline{18} \\ 2 \end{array}$$

$$y = 2 \frac{2}{9}$$

Q6(c)

3, 125, 256, 27, 4, 1

2, 6, 18, 54, 162

Q#7a

Price of 2 scooters = Rs. 96000

$$\text{profit on 1}^{\text{st}} \text{ scooter} = \frac{20}{100} \times 48000 = \text{Rs. } 9600$$

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

$$\text{Price of 2}^{\text{nd}} \text{ scooter} = \frac{20}{100} \times 48000$$

loss on 2nd scooter = 9600

No profit no loss.

Q7c:

$$U = \{a \dots z\}$$

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

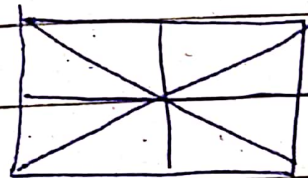
$$A' = ?$$

$$U - A = \{a \dots z\} - \{a, e, i, o, u\}$$

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

Q8c:-

There are 16
Triangles in the
figure.



Q8b:-

$$\frac{3}{8}$$