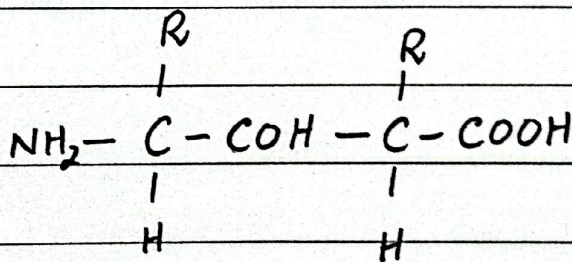
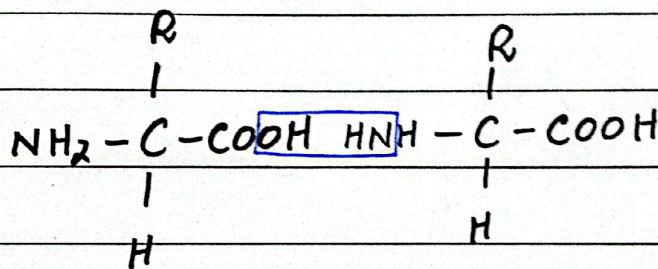


Q #03A: Proteins & Carbohydrates:Proteins:

Proteins are large, complex molecules made up of amino acids, linked by peptide bond.

Functions of Protein:

Proteins are essential for;

→ Growth

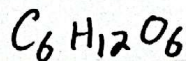
→ Repair of bones

→ Normal functioning of body.

Carbohydrates:

organic molecules
organic molecules made up of
H, C, O in the ratio of 1:2:1

Example:



Digestion:-

I Mouth:

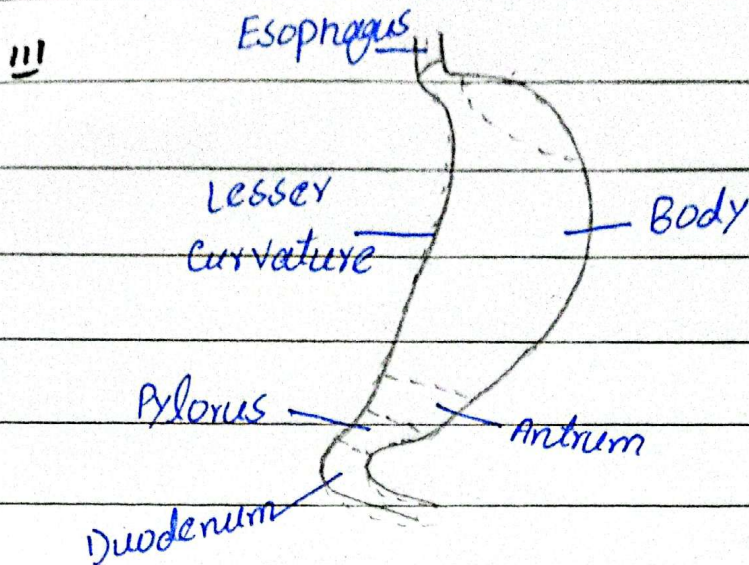
Salivary enzymes breaks
down starch into maltose and
dextrins, and proteins are converted
into polypeptide.

II Small Intestine:

II Stomach:

Here gastric glands secrete
gastric juice, mucous and HCl
to kill the microorganism.

Proteins are further converted
into polypeptide with the help
of pepsinogen.



→ Small Intestine:

Digestion complete here. Several enzymes are created. Remaining 90%.

→ **Pancrease**: Secrete pancreatic juice to convert starch into maltose.

→ **Lipase**: Convert fats into fatty acid.

→ **Amino Peptidase**: To convert polypeptide into dipeptide.

→ **Erypsin**: Dipeptide into amino acid.

Date: _____

Day: _____

Large Intestine:

Caecum: To absorb water.

Colon: To re-absorb water vitamins & mineral.

Rectum: To store waste temporarily.

Complete Food digestion takes 36 hours.

B: Explain;

! Atmospheric Pressure:

Pressure exerted by air in the Earth's atmosphere & on a surface.

Unit:

Pascals (Pa)

mm Hg

Measurement:

Measured using a barometer.

Date: _____

Day: _____

II Temperature:

It indicates that how hot or cold the atmosphere is

Unit:

→ Degree Celsius ($^{\circ}\text{C}$)

→ Fahrenheit ($^{\circ}\text{F}$)

Measurement:

Measured with the help of Thermometer

III Humidity:

Amount of water vapour present in the atmosphere

Unit:

Gram per cubic meter.

Measurement:

→ Hygrometer

→ Psychrometer.

C: Earthquake:

"Abrupt movement of tectonic plates causes sudden release of energy in the form of seismic waves that causes vibration in the earth."

Causes:-

The tectonic plates, during the earth's motion, rub against each other and they are stuck together at the edges. As the rest of the plate continues to move, the strain build up and it reaches to an extent that rocks could not withstand and breaks. This breaking of the rock causes earth-quake

Components:

Date: _____

Day: _____

→ **Fault:** cracks along which the rocks slip

→ **Focus:**
where slip first occurs.

→ **Epicentre:**
The point exactly above the focus

Types:

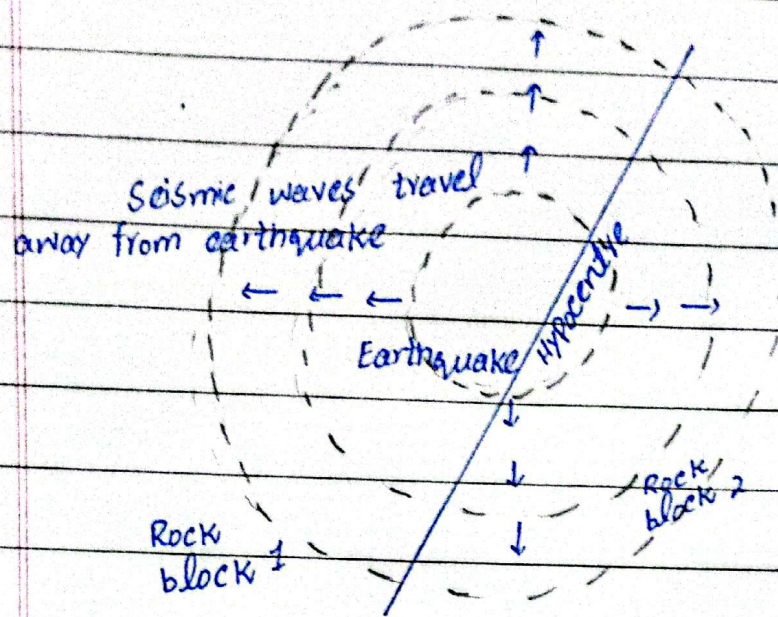
Shallow: when depth is less than 60 km.

Middle:

when depth is between 60 km and 300 km

Deep:-

when depth is more than 300 km.



Q # 04

A: Solar System:

Solar system
Comprises of Sun, stars, moon,
celestial bodies and all
the planets revolving around
the earth.

Components of solar system:-

(i) Sun:-

A massive star at
the centre of solar system.
It generates energy through

Date: _____

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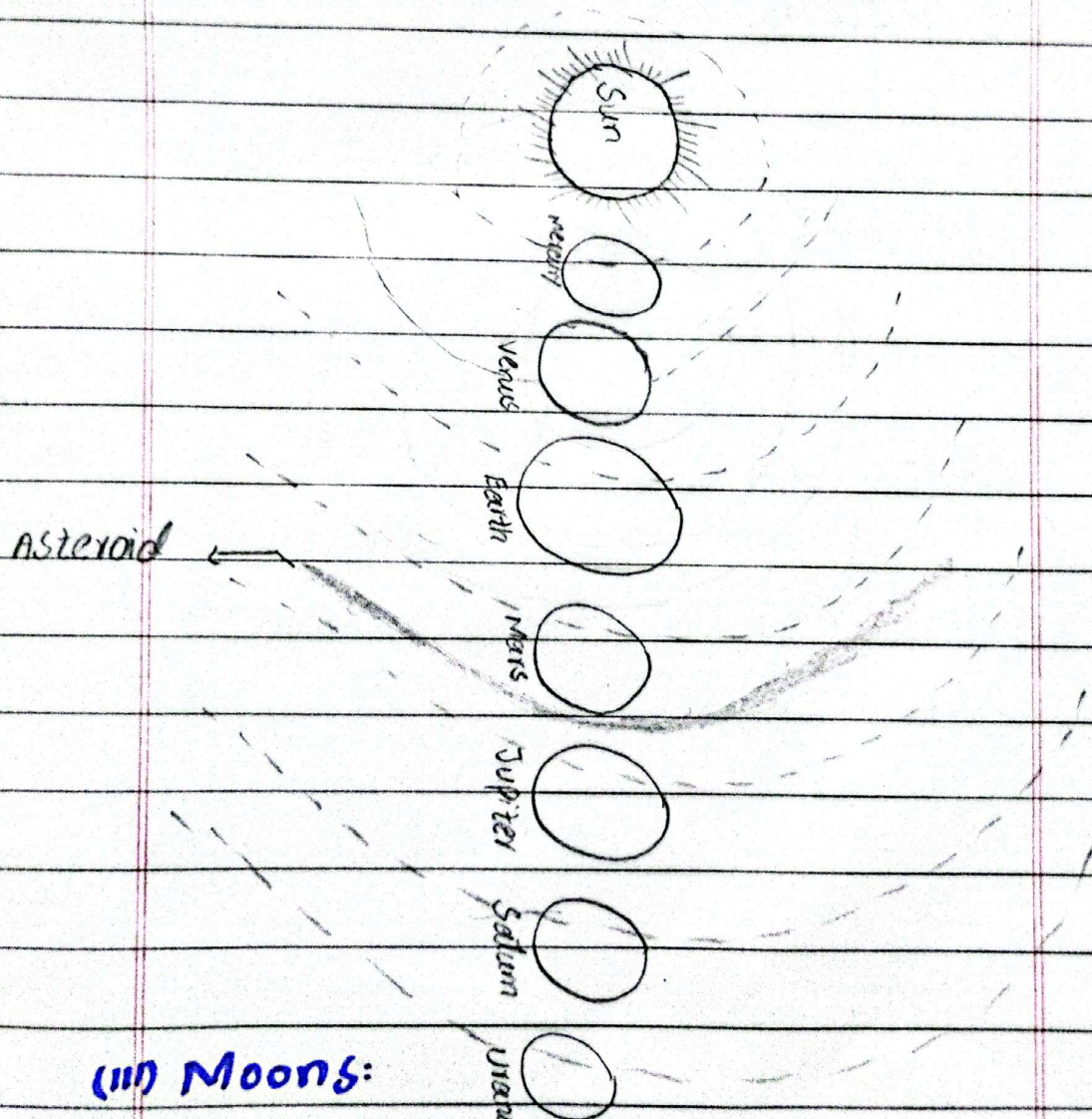
nuclear fusion.

Composed of 70% H_2 & 28%

He gases.

(ii) PLANETS:-

Some terrestrial planets and giant and dwarf planets that revolve around the sun.



(iii) MOONS:

Every planet has its own moon. For example Earth

Date: _____

Day: _____

has only one moon called
"Luna"

→ Mars has 2 moons.

→ Jupiter has 67 moons.

(iv) Asteroid

(v) Comets

(vi) Meteors

Sun contains 99% of solar
system's mass.

(B) - Pituitary Gland:

Pituitary
gland is a pea-shaped endocrine
gland located at the base
of brain.

It is called "master gland".

Importance:-

1. Hormonal Regulation:

It controls the secretion of
hormone from other endocrine

Date: _____

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glands.

II Growth & Development:

It produces growth hormone which stimulates growth, cell reproduction.

III Metabolism:

It regulates metabolism through the release of TSH.

IV Stress Hormone:

Secretes adrenocorticotrophic hormone, which stimulates the adrenal glands to produce stress hormone.

V Childbirth and Bonding:

It secretes oxytocin, which plays a role in childbirth.

Date: _____

Day: _____

(C)- RAM & ROM:

RAM:-

A type of volatile memory used for temporary data storage.

ROM:-

A type of non-volatile memory used to store permanent data.

Difference:-

RAM	ROM
volatile: Data is lost.	Non-volatile: Data is retained.
Data can be written, modified and erased	Data is pre-written and cannot be erased
Faster access speed	Slower access speed
Typically measured in GB TB	Usually smaller in size, measured in KB or MB.
Examples: DRAM	PROM, EPROM

Date: _____

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USB:

"Universal Series Bus"

It is a standard for connecting devices to computers, and for exchanging data & power between them.

Motherboard:

Main circuit board

in a computer that connects all of its internal components.

SECTION - B

Q:

Solution:

Average of 7 consecutive numbers

is 20

$$\frac{x + (x+1) + (x+2) + (x+3) + (x+4) + (x+5) + (x+6)}{7} = 20$$

$$\frac{7x + 21}{7} = 20$$

$$7x + 21 = 20 \times 7$$

Date: _____

Day: _____

$$7x + 21 = 140$$

$$7x = 140 - 21$$

$$7x = 119$$

$$x = \frac{119}{7}$$

$$x = 17$$

b:

C is A's cousin

D is A's cousin but not the brother of C.

As D is not the brother of C, then it means that D is C's sister.

(C) :- 11, 17, 39, 85, —,

$$11, \overset{+8}{\text{---}}, 17, \overset{+22}{\text{---}}, 39, \overset{+46}{\text{---}}, 85, \overset{+80}{\text{---}}, 165$$

165

Q # 08

(B):

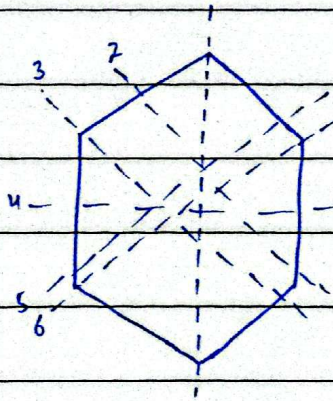
I Conscientious

II Preservation

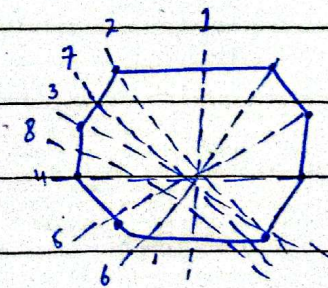
(C): Elements of Symmetry:-

Hexagon:-

A regular hexagon
has 6 lines of symmetry.



Octagon:- 8 lines of symmetry



Date: _____

Day: _____

Circle:

Infinite number of lines
of symmetry.
