

# SECTION-II

Q=7.

(a) let number =  $x$

$$x \times \frac{3}{5} = 0.6 \text{ and } x = \frac{5}{3} = 1.6$$

$$-\frac{3}{5} + \frac{5}{3} = \frac{-9+25}{15} = \frac{16}{15} = \frac{1.06}{0.6} \times 100 = \boxed{177\%}$$

Ans

(b)

Chocolate : ice cream  
5 : 8

30 :  $x$

$$\frac{5}{30} = \frac{8}{x} = 5x = 240 \quad x = \frac{240}{5} = \boxed{48}$$

(c)

let tablet =  $x$

Tablet medication

1 30mg

$x$  240

$$\frac{x}{1} = \frac{240}{30} = 30x = 240$$

$$x = \frac{240}{30} = \boxed{8} \text{ Tablets}$$

(d) Avg = 20

number = 50

$$20 = \frac{x}{50} = 1000$$

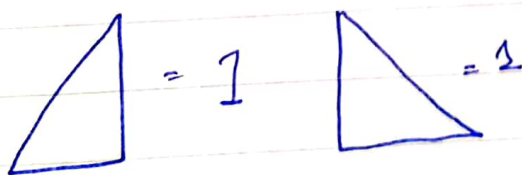
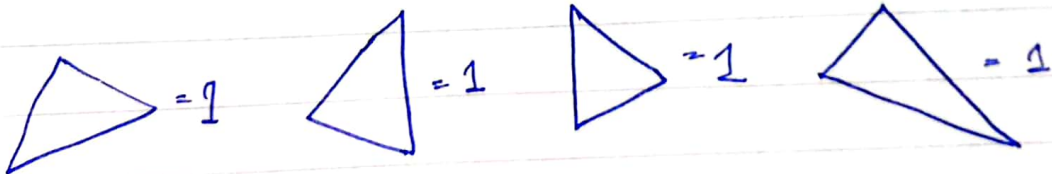
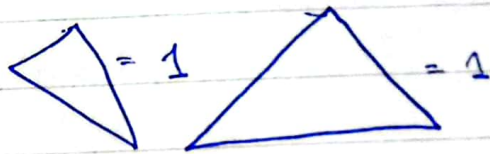
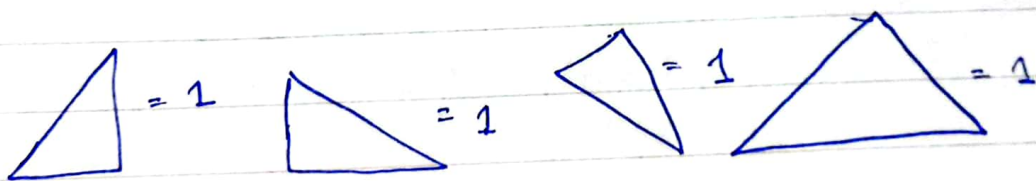
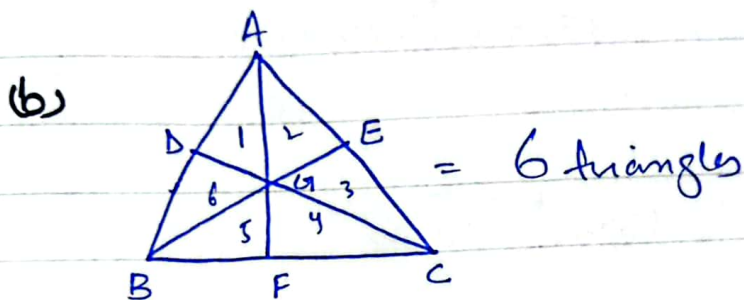
$$\rightarrow \frac{37+43}{2} = 40 \text{ avg} \rightarrow \text{discarded}$$

$$\boxed{x = \frac{920}{48} = 19.16 \text{ new Avg.}}$$

Q=8

(a) Formula of IQ

$$IQ = \frac{\text{mental ability age}}{\text{Chronological age}} \times 100$$



10 + 6 = 16 triangles.

(c) 'Superintendent'      Vow vowel = 3

$$\text{Probability of Vowel} = \frac{\text{occurrence of vowel}}{\text{total}}$$

$$= \frac{3}{121}$$

(d) Rs = 4320 Distribution to individuals

$$\text{Zain : Aslam : Ashraf} \\ 2 : 3 : 7 = 12$$

- Zain's share

$$\frac{2}{12} = 0.166 \times 4320 = \boxed{720}$$

- Aslam's share

$$\frac{3}{12} = 0.25 \times 4320 = \boxed{1080}$$

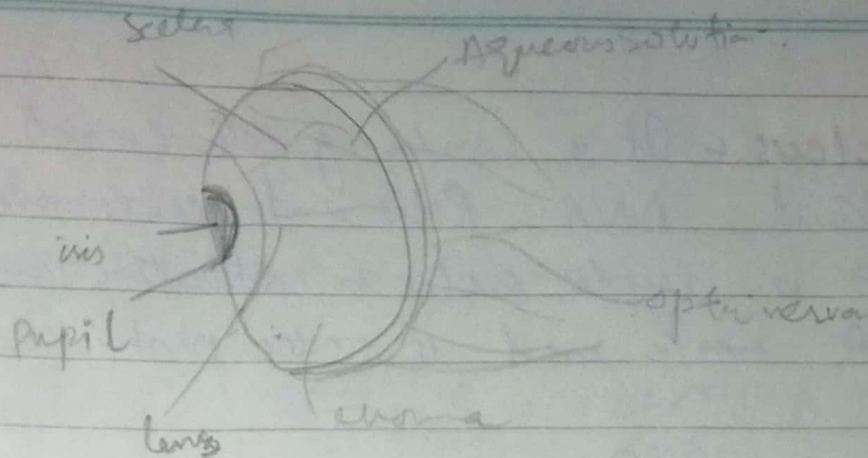
- Ashraf's share

$$\frac{7}{12} = 0.58 \times 4320 = \boxed{2520}$$

# SECTION-1

Q=4

(a)



Myopia - It is long sightness. It can be corrected with concave lens.

(b) Cell is structural and functional unit of life. It can be examined by microscope. It consists of many cell units called organelles.

Cell was discovered by Robert Brown 1865. It has 2 main components - Nucleus and Cell membrane. Cell membrane is made up of glycoprotein and Nucleus is center of cell.

## Cell organelles

Cell membrane: It is outermost structure of cell which is semi-permeable in nature and made up of polypeptide and glycoprotein. It has intrinsic and extrinsic part in membrane. It is also known as plasma membrane.

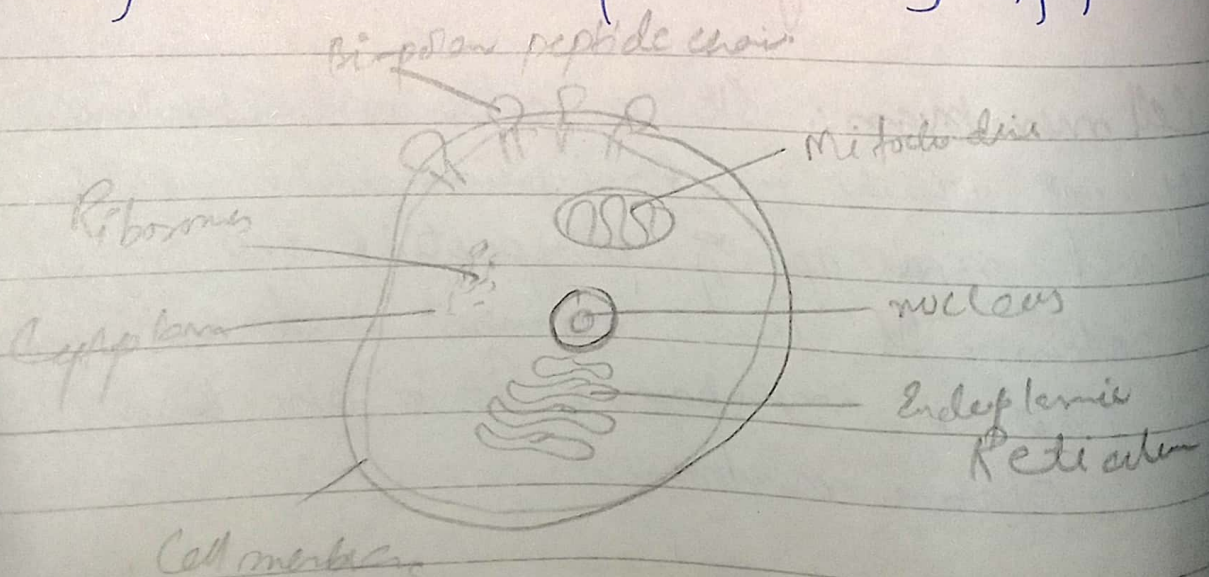
**Nucleus** - It is center of cell, consists genetic material, DNA, RNA and chromosomes. DNA is double helix in structure and RNA ~~has~~ is used to make protein.

### Endoplasmic Reticulum

It is found in cytoplasm of cell. It consists of two types - Rough ER and Smooth ER. They are used in making of RNA and protein as well as lipids.

**Mitochondria** - It is power house of cell. It converts ADP into ATP, which is energy component.

**Ribosomes** . They are circles in nature. They used to help in making of protein.



## (c) Galaxies -

Galaxies are gravitational bounded systems. It has galactic center, which consists of dust, wind, particles, gases and known as Blackhole. Galaxies are consists of arms, the arm in which our solar system exists is 'Orion' and black hole is Sagittarius A\*.

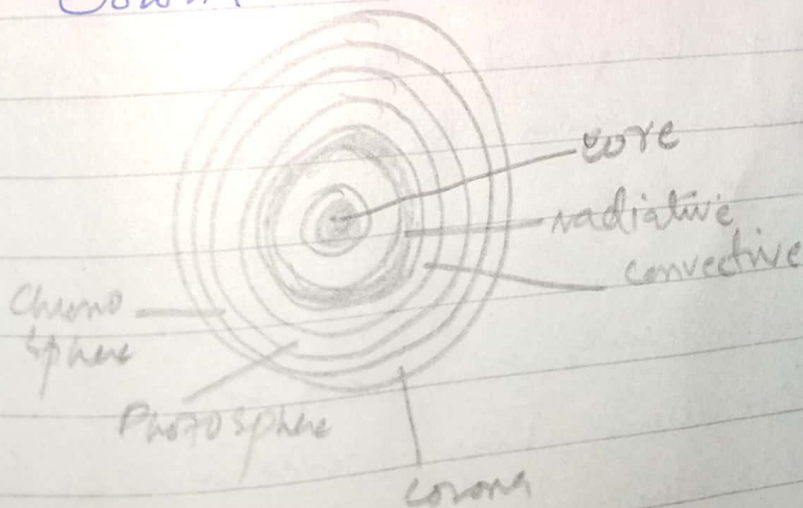
### Types

- 1 Spiral
- 2 Lenticular
- 3 ~~Dwarf~~
- 4 Elliptical
- 5 Irregular

- Galaxies are free floating in Universe.

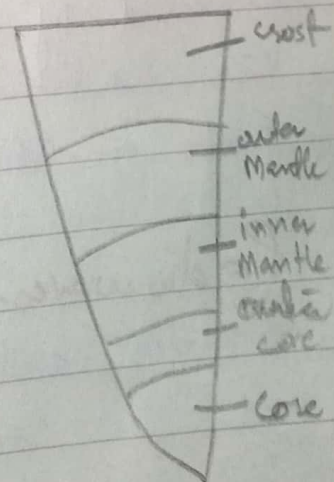
## (d) Parts of Sun

It consists of  
Core, radiative, Convective  
photo sphere, Chromosphere  
Corona



## Parts of Earth

It consists of  
Core, outer core,  
inner mantle, outer  
mantle, Crust.



Q-5

(b) Covalent

Covalent bonds make bonds by sharing of electrons between two or more elements

Eg. HCl, H<sub>2</sub>O

Covalent bonds are difficult to dissolve in water.

Tightly bonded

Ionic

Bonds are made when element give electrons to other element.

Eg. KCl, NaCl

Easy to dissolve in water.

Loosely bonded

(c)

Gamma Rays It is with highest frequency in electromagnetic spectrum. It is used in medical departments. with shorter wavelength.

X-rays - It is radioactive element. discovered by Henry Becquerel. It cross the hardest surface. Shows the internal position or structure of body.

Radio waves. Radio waves are used in radio and television. These waves are used for communication.