

AYESHA- AHMED

Batch: 83

Mock: GSA

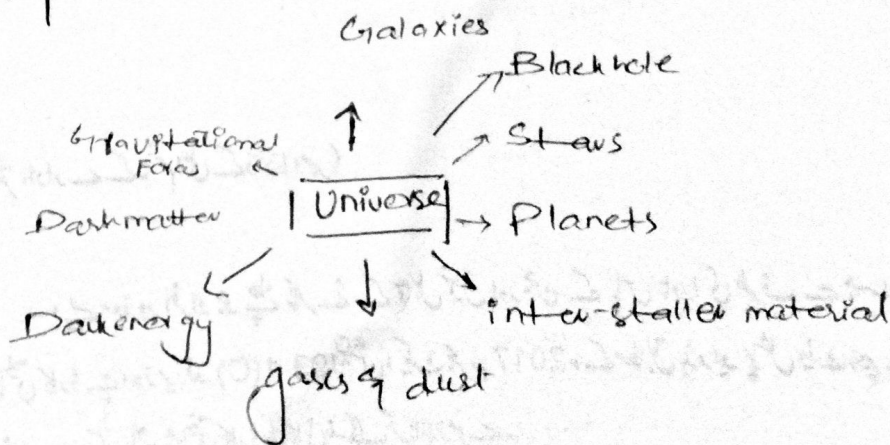
Date: 3-January-2020

QUESTION NO:1

1. Definition of Universe.

Universe is composed of all the existing matter including Galaxies, Black-hole, Stars, Planets, interstellar material, gases and dust, Dark-energy and Gravitational forces that combine it together and give it a compact shape.

2. Mind Map:



Big Bang Theory:

According to Big Bang Theory

the universe is approximately 14.56 Billion years old

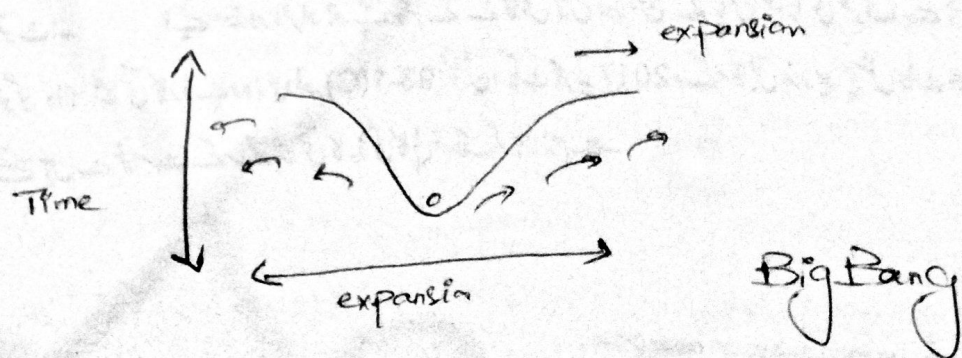
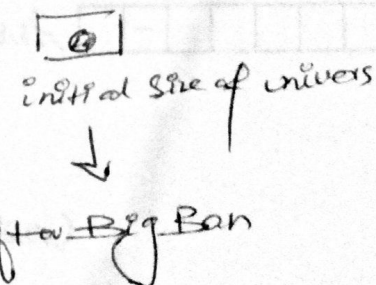
Origin and shape according to Big Bang:-

According to

Big Bang universe was the size of a pin head before the big bang occurred and after it started expanding in an enormous rate in a flat disc but in form of a cosmic web.

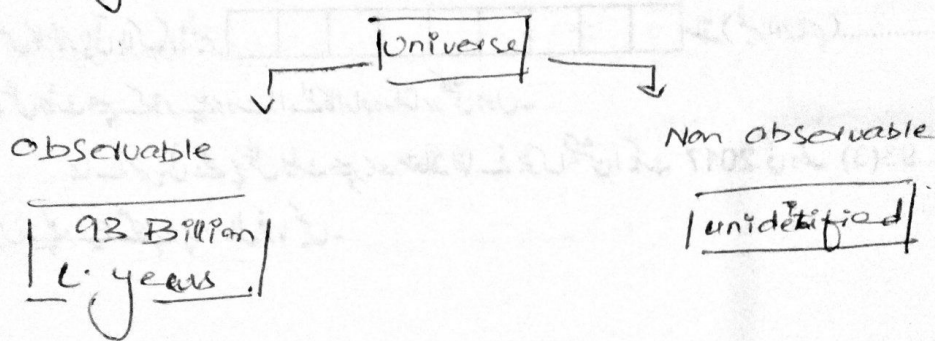
Now universe is too vast enough to measure thus far and feasibility the division of universe has been done universe is still expanding.

Diagram:-



Division of Universe

- 1 - Universe is divided into Observable Universe which is approximately 93 Billion-
- 2 - and Non observable part which is beyond human knowledge



Model of Universe according to Big Bang:-

Following are the models

- 1 - Geo-Centric
- 2 - Heliocentric
- 3 -

Primary model of Universe

Primary Model of universe in Lambda CM model, which describe universe's expansion from the a hot, dense state of matter

to dominated by dark energy and dark matter to the vast the cold universe.

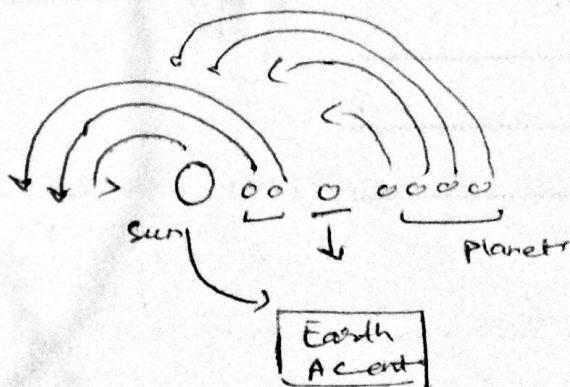
Geo-Centric Model:-

Geo-Centric is a historical model which works on Ptolemy. Placing Earth as a center while Sun, Star and other Cosmic material revolve around it.

Heliocentric:-

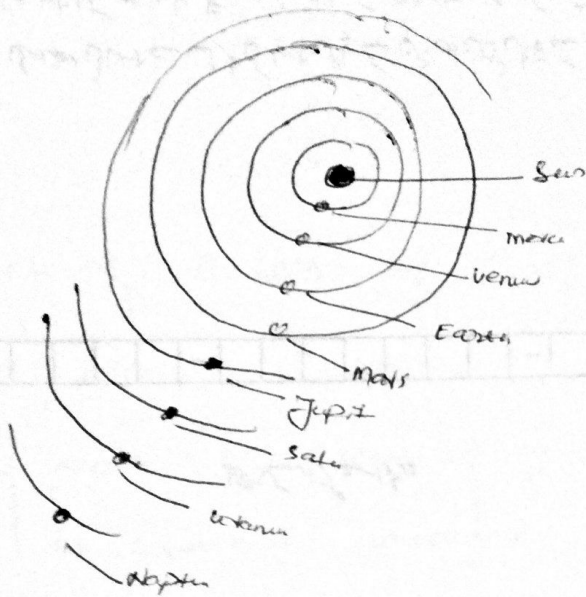
Proposed By:- It was Proposed by Copernicus Placing Sun as the Center of Universe.

Geo-Centric:-



revolving around earth.

Halo-Centric



Planets revolving around

Sun in halo-Centric model--

Part : 2

Question:- what is un-Balanced diet? How it
effected human Body?

↳ Definition of unBalanced diet:-

A un-Balanced diet means eating too much or too little, or eating processed food which directly result in either

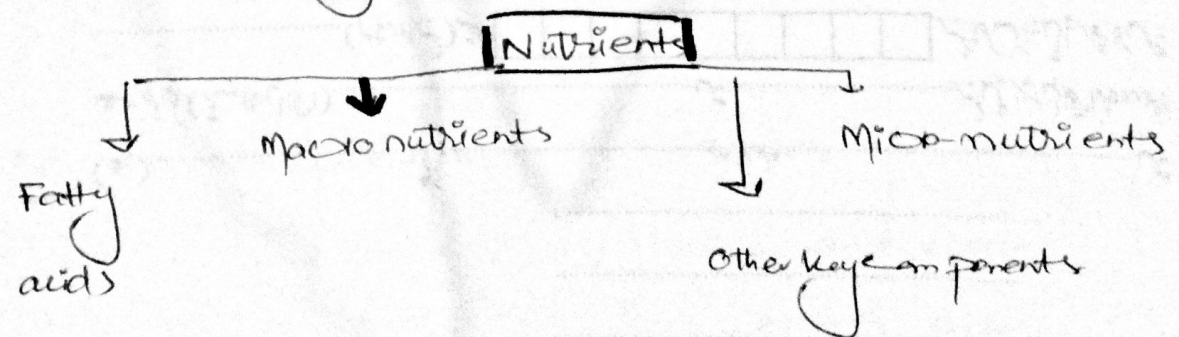
too much nutrition in the body or
deficiency of nutrition-

OR

Lack of excess of Carbohydrate, proteins,
fats, minerals, vitamins or absence of any
of above or excess of any of nutrients
is called unbalance intake of
nutrition

Important Nutrients the human body needs-

Division of nutrients in human body
is in such way:-



EFFECT on Body due to deficiency
of nutrients

1. Macro-nutrients

Macro-nutrients included:

- 1- Protein
- 2- Fats
- 3- Carbohydrate

1 Effect on human body:

1- Lack of absence of Carbohydrate cause fatigue, poor appetite, and loss of energy as it is the main provider of energy.

2- Fats work for protection of organs, regulation of hormone, and storage of energy. absence of fat affected all these domains.

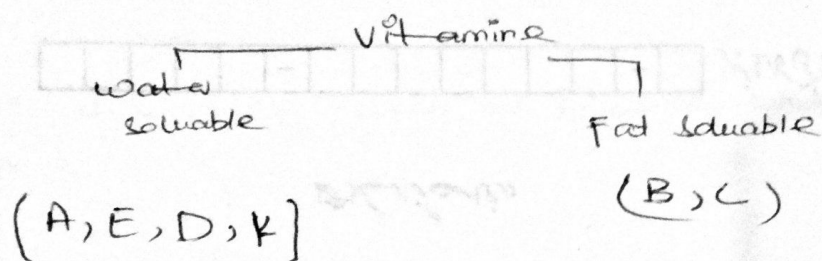
3- Carbohydrate are main source of energy by breaking glucose and work as a fuel to your brain & body. It halt functioning of brain and body if not taken in balanced amounts.

Micro nutrients

They contain

- 1) Vitamin
- 2) Minerals

1- Vitamins



EFFECTS

absence disturbs hormone, metabolism and cell function

2- Deficiency vitamin B-3 cause hair fall

3- Vitamin D - deficiency lead to poor absorption of calcium in bones

4- Vitamin-A deficiency cause night blindness

Minerals

EFFECTS

Minerals contain, IRON, Zinc, Potassium and Calcium-

• Deficiency of Potassium and Calcium
Cause osteoporosis.

• It also compromise nervous system
as Calcium is main part and essential
for neurons

• It also work to Balance bone fluids

Fatty Acid

EFFECTS

- 1- Fatty acid like Omega-3 help in healthy
functioning of heart.
- 2- Manage Brain functions
- 3- It also reduce inflammation.

Other key Components

EFFECTS

They include water and fiber.

- 1- water is essential ^{for} as 70% of body contain
water. It manage food digestion
- 2- fiber help in maintaining Blood sugar
by acting as a web.

QUESTION NO: 8

Question: 1

There are five different house in a row. A is to the right of B and E is to the left of C. B is to the right of D.

which of the house are in middle?

→ ANSWER:-

→ Given Data:-

→ According to the given Data:-

1- (A) is to the (right) of (B) -

2- (E) is to the (left) of (C)

3- (E) is to the (right) of (A)

4- (B) is to the (right) of (D)

→ Required Data:-

which house is in the middle?

Solution:

Arrange the houses according to the data

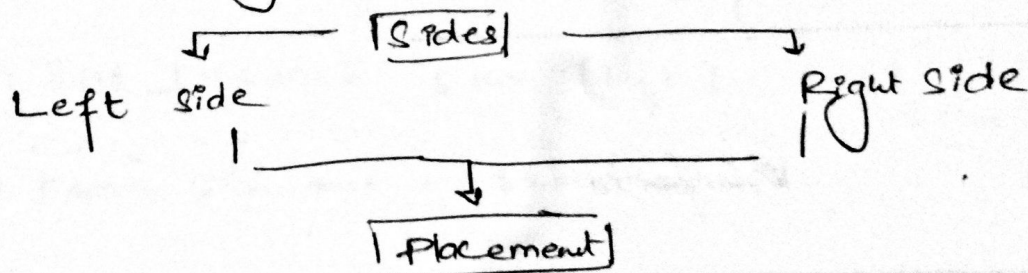
1- A is to the right of B

2- E is to the left of C

3- E is to the right of A

4- B is to the right of D

Determining Left and Right



(i) B A A is to the right of B

(ii) B A E C E is to the left of C, and right of A

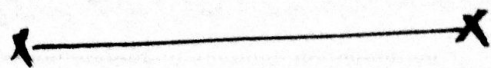
(iii) D B A E C D to the right of B

Final Positions

D, B, A, E, C.

Middle are.

A is in the middle.



QUESTION NO: 2

Given Data:

- i) Starting Point = "O".
- ii) First ~~then~~
Distance = 4 km (N)
- iii) 2nd Distance = 5 km (left of North)
- iv) Third Distance = 5 km (left)
- v) Fourth Distance = 6 km (Left)
- vi) Last distance = 1 km Left

Required Data:

- i) How many km are you from the place you started
- ii) In which direction you will be running while finishing.

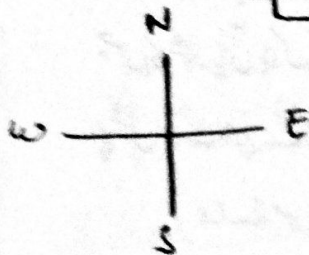
iii) Position / Direction after 2nd turn

iv) Direction from end point toward starting

Step: 1

Solution:-

Determining positions:-



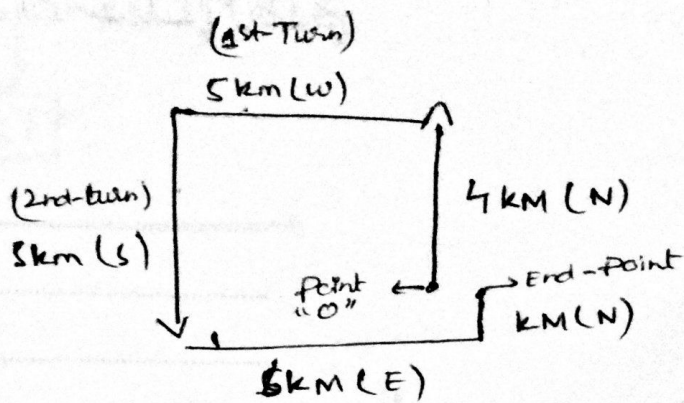
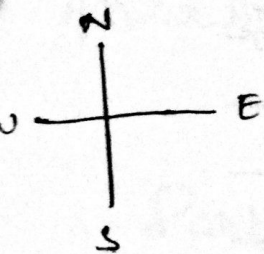
← Cardinal Direction

Step: 2:-

Solving the Questions

1- How many km are you from the place you started?

Find Map



Answer:- According to above figure
Distance from starting point is 1 km

Final Answer = 1 km

2- In which direction will you be running while finishing.

Answer:- According to above figure:- Direction would be (North)

Final Answer:- North

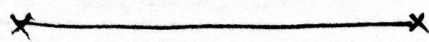
3- Direction after taking 2nd turn

Answer:- South

4- From the finishing point if you have reached a point where you started, in which

direction will you run.

ANSWER: WEST.



Part : 3

Find the odd man out:-

- a) THRSI
- b) AOTC
- c) EOUBSL
- d) KTRIS
- e) RETAEWS

To find the odd among following
we have to rearrange the above
words

- a) THRSI = SHIRT = Shirt
- b) AOTC = COAT = Coat
- c) EOUBSL = BLOUSE = Blouse
- d) KTRIS = SKIRT = Skirt
- e) RETAEWS = SWEATER = Sweater

Among the following words:-

Shirt, Coat, Blouse, Skirt and Sweater-

Skirt is the odd one, as all other are the piece of cloth that are used above limbs- while Skirt is supposed to wear/cover limbs-

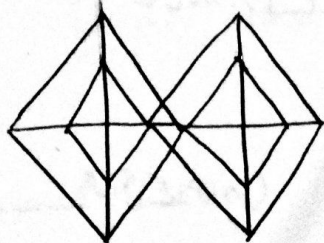
Final answer:

Skirt is the odd one out-

X ————— X

Part IV:-

How many triangle can you find in figure?

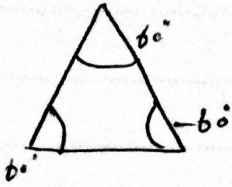


Solution:-

Figure of triangle:- $\triangle$, $\triangle$, $\triangle$, $\triangle$

Angle in triangle:- A triangle have three sides

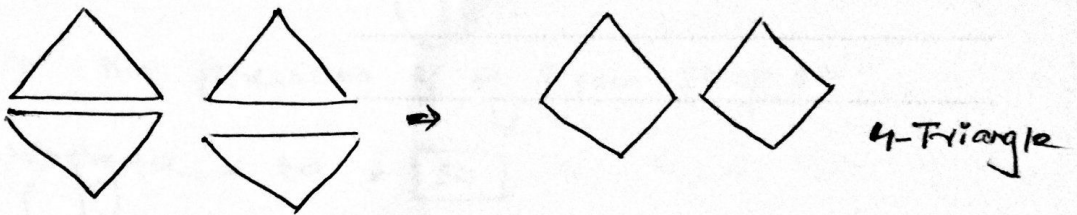
and 60° angle among each side.



Let's find the No of triangle in above figure on the Bases of shape and angle

Step: 1

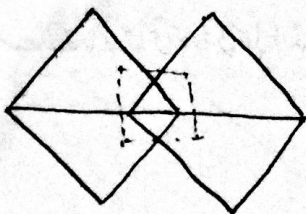
: Breaking the shape:-



Above figure have 4 small main triangle from the original figure.

Step: 2

Combining above two figures



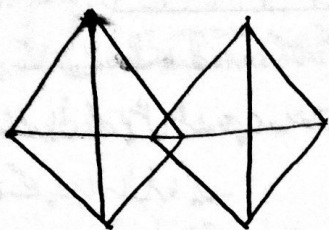
6-Triangles

By Combining above two figures

Two triangles formation can be seen, thus
total number yet is $\boxed{6}$.

Step: 3

Let's divide the figure from step 2

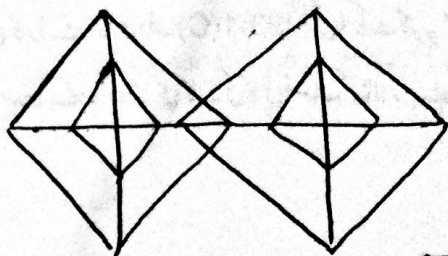


8 - New triangle formation will occur
with in the previous 4 of from step 1:-

Bringing total to = $\boxed{14}$

Step: 4

Formation of same figure within the
larger figure

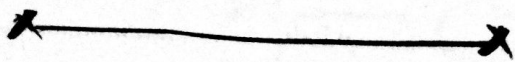


Same figure make 8 - new triangle formation of the

Bringing total to

$$14 + 8 = 22$$

Thus No. of triangle are $\boxed{22}$



$\therefore$ QUESTION NO: 4 ::

Part 1:

Pointing to a woman, Ahsan said

"Her grand-daughter is the only daughter of my brother" - How woman is related to Ahsan?

Answer:

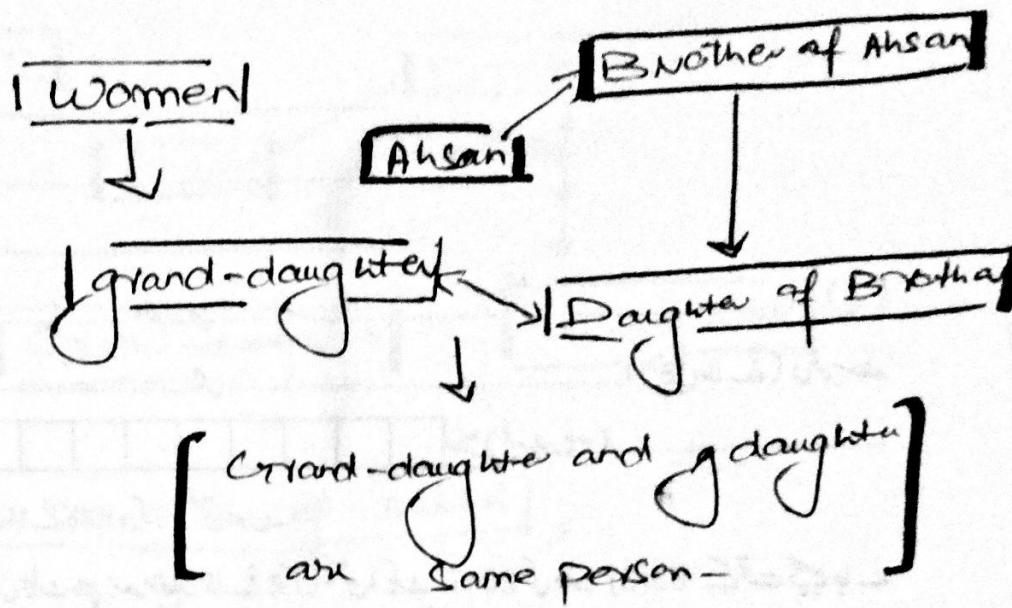
Given Data:

- i) woman have a grand-daughter
- ii) Grand-daughter is only daughter of Ahsan's Brother

Required:

Relation between woman and Ahsan

Mind-Map:

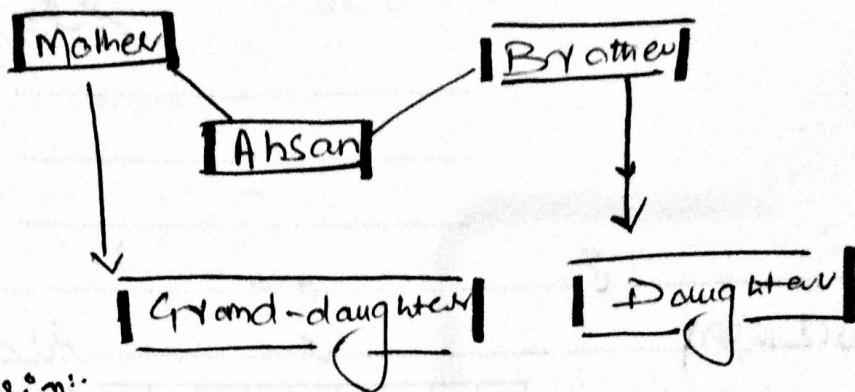


Conclusion — from mind map:-

- a) As, Ahsan's Brother's daughter is the grand-daughter of women
thus women must be the mother of Ahsan's Brother.
- b) As women is the mother of Ahsan's Brother
She is also the woman mother of Ahsan.

Mind Map reconstructed

Ahsan $\longleftrightarrow$ Women
Son $\longleftrightarrow$ Mother



→ Conclusion:-

Women is the mother of Ahsan,

✕—————✕

Part D

→ Given Data:-

L.C.M of two number = 48
Ratio = 2:3

Required Data:-

Sum of two number = ?

Solution

Step 1

Let's assume

$2x$ and $3x \rightarrow (1)$

L.C.M of $2x$ and $3x$ would be = $6x$
 $(2x, 3x) = 6x \rightarrow (2)$

Step 2:

Comparison of LCM of numbers and ratio

$$6x = 48$$

$$x = \frac{48}{6}$$

$$x = 8$$

Step 3:

Put the values of x in equation 1

$$i) \quad 2x = 2(8) \Rightarrow 16$$

$$ii) \quad 3x = 3(8) = 24$$

Final Step Find the sum of numbers

$$\text{Sum} = 16 + 24 \Rightarrow \boxed{40}$$

Thus sum of two numbers are

"40".