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Section - II

Question No 3

(a) ---

Answer:

Introduction

As the world witnessed 2023 was the hottest year according to Asian Development Bank. For this purpose in the end of year 2023 in Dubai a conference of Parties - COP 28 was staging ~~for~~ to control global warming and climate change effects.

Major hurdles in developing countries to tackle the impact of global warming:

Developing countries are the strongly affected countries from the climate change effects.

Urban Flooding:

Developing countries are facing the urban flooding. Like in 2022 Pakistan face its worst earthquake in his history.

Temperature increases 2°C:

July 2023 was the hottest month of the ~~present~~ history. Because world witnessed the

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average 2°C increase in temperature.

Less rains:

In the month of Nov, Dec 2023 developing countries faced dry winter with no rain. That causes diseases among public specially for children.

COP 28 role for the climate control:

COP 28 played significant role for the climate control and to help the countries who are still under-developed.

Generating Fund:

Developed countries generated funds for the compliance of their role of global warming.

Control on temperature agreement:

Developed and underdeveloped countries get ready to control the temperature up to 1.5°C less.

Generating trees for clean environment:

All the members of confrens of parties voted on generating trees for clear environment.

Conclusion:

CSP 28 was the significant event in light of Kyoto protocol and Paris agreement to strengthen the world environment in accordance of climate crisis and world global warming.

b
Balance Diet:

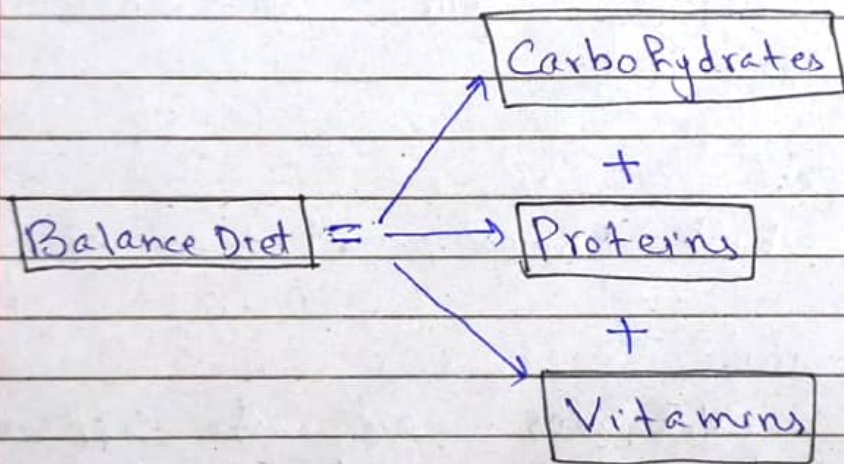


Fig: Balance Diet

Balance Diet is the combination of Carbohydrates, Proteins and vitamins. These three components are necessary to balance the diet of a human body.

Carbohydrates:

Carbohydrates are the most important component of diet

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that needs as basic requirement of the body.

Example:

Wheat, vegetables, etc

Proteins:

Proteins are the second important component of balance diet of the human body. It manages the proteins of the body.

Example:

Fish, meat, chicken etc.

Vitamins:

Vitamins are the supplements of food that need to balance the human body with the combination of carbohydrates and proteins.

Ex: Example:

Fruits like Oranges, Mangoes, or vitamin supplements.

C-----

Introduction:

Machine Learning is the subset of Artificial Intelligence.

It is revolutionary for today worlds in the form of education, business, military defense and health care.

Machine learning is the subset of Artificial Intelligence:

Machine learning is like an ambassador of AI. It represents the AI function in the form of machine learning tools to merge the Artificial Intelligence in the tools.

Revolutionary for today words:

Machine learning as a subset of Artificial intelligence is revolutionary for today words in the different public section.

Revolution in Education:

AI and ML tools are used in education specially in Open AI, Artr or Chapt GPT 3, CHAT GPT 3.0, and CHAT GPT 4 to advance the level of education.

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Revolution in Health:

AI is revolutionary in health sector. Specially in surgery of Brain and heart. It facilitates the doctor to manage the functions of surgery.

Revolution in Judiciary:

Judiciary revolution is an unique segment. But in Pakistan the month of July 2023 a judge of session court DG Khan give juvenile order with accordance of use of AI and ML technique like CHAT GPT 3.0.

Conclusion:

AI and ML are the revolutionary words for our earth. They manage to change the world and its need with accordance of their algorithms and logics.

D. Introduction:

RAM and ROM both are the important component of computer to pass the memory from one unit to another unit.

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Difference:

RAM

RAM stands for Random Access Memory

RAM is volatile memory

Memory removed while switch off the computer

Memory lost with due to power break

~~Mem~~ RAM memory cannot be editable.

RAM has different types like.

⇒ PRAM

⇒ EPROM

⇒ EEPROM

Can read and write memory

ROM

ROM stands for Read only memory.

ROM is non-volatile memory.

Memory remain save while computer is switch off.

Memory remain save during power break

ROM also cannot be editable.

ROM has no type.

Can only see the memory and read it

Conclusion:

RAM and ROM both are the important components of the memory unit of the computer and distinguish the memory access as read only of the memory

Question #5

a. _____

Introduction:

Food preservation is an important component of food safety. It has managed by different methods.

Using Refrigerator:

Top of the list component of food preservation is Refrigerator. Due to refrigerator food is prevented at specific temperature to manage the nutrients of the food

Using Salt for preservation:

Food preservation specially the proteins of food like fish meat and chicken can be

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preserve with the help of salt.

Using sunlight for prevention:

Usually people use sunlight for the prevention of food in the sense of dry the food elements.

Using water for prevention:

The long lasting vegetables are usually prevent by the water. For this purpose people dip the vegetable in water and stored them in to the cold places for long time use.

Conclusion:

People use different method of prevention of food like refrigerator, salt, sunlight and water to prevent different kind of foods.

b. ———
Introduction:

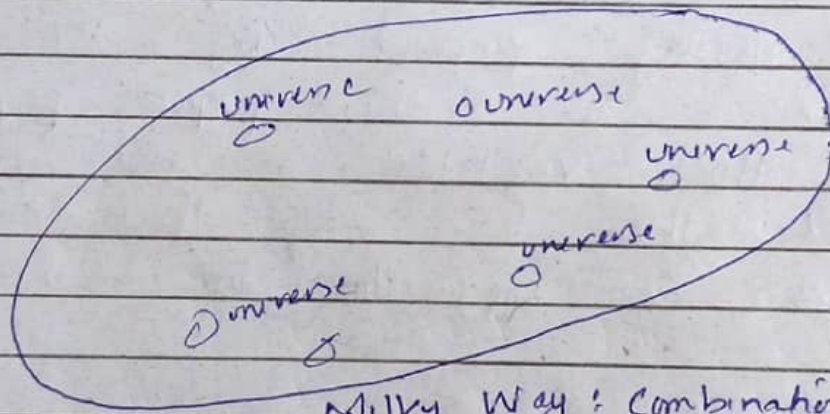
Our universe is comprises of different planets, Dwarf planets, stars, universe and milky

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way and light years.

Milky Way:

Milky way is the combination of stars, planets, dwarf planets, solar systems. These all components are combined and make a milky way. Milky way is the combination of universes.



Milky Way: Combination of the universe.

Fig: Milky way.

Dark Matter relation with Galaxies:

Dark Matter are those matter through which sun light can not directly pass through them. Due to this phenomenon they are remain dark but as they are under the part of our solar system that's why they are related to galaxies.

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Different Part of Galaxies.

There are many parts of galaxies in which:

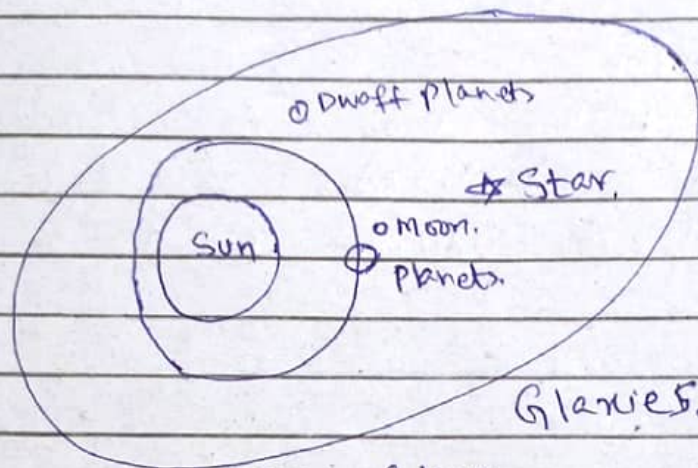


Fig: Galaxy.

Sun:

One of the major part of galaxies which provide light and heat.

Planet:

Planets are the matter which revolves around the sun. Earth is planet.

Moon:

Moon is the matter which revolves around the planet. Like earth has moon name Luna.

Star:

Stars are the components of galaxies which shine with the help of sun light.

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Dwarf planet:

Dwarf planets are the mobile planet in the galaxy whose direction is not strict.

Conclusion:

Milky way and galaxies are the combination of different stars, planets, dwarf planets, moons etc.

C-----

Solar Eclipses and Lunar Eclipses:

Introduction:

Solar and Lunar eclipse are the two most important component of our solar system. Eclipse is formed by the disturbing of path of earth or moon between solar and moon or solar and earth respectively.

Solar Eclipse:

Solar eclipse is the phenomena when moon comes between the path of sun and earth. Due to this sun light can not be received at earth properly.

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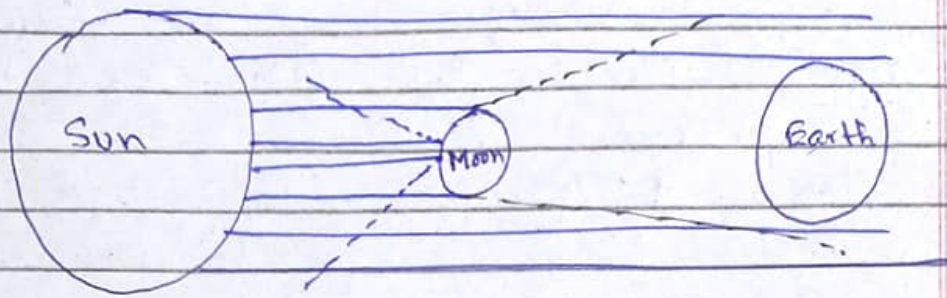


Fig: Solar Eclipse

Lunar Eclipse:

Lunar Eclipse is when earth comes between the sun and moon that's why sun light can not reached the moon called - Lunar Eclipse.

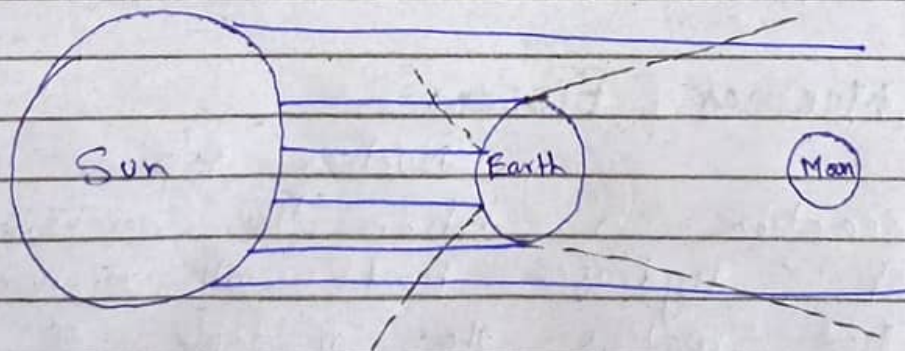


Fig: Lunar Eclipse

Conclusion:

Eclipse is the formation by crossing the path by earth or moon. In both the cases temperature of eclipse matter surface goes down.

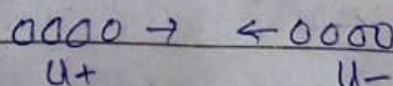
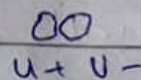
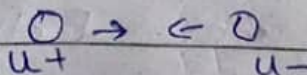
d-----

Introduction:

Nuclear fission and fusion reaction are the combination of uranium in the form to accelerate the reaction of the chemical. Ionic bond in table salt is also the example of nuclear fission reaction.

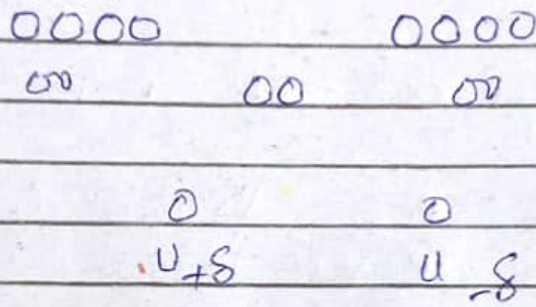
Nuclear Fission:

Nuclear fission reaction is when the combination of Hydrogen bond with uranium that makes the multiple of the reaction



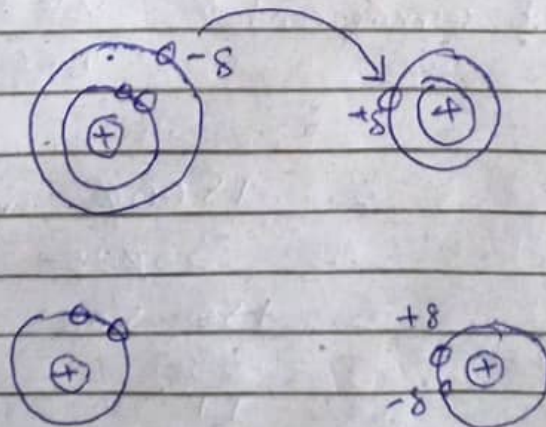
Nuclear Fusion:

Nuclear fusion is the reverse of nuclear fission reaction. In this method two uranium bonds combine to make the one bond.



Ionic bond in table salt:

Ionic bond in table salt is the transfer of one extra electron from one bond to another bond.



Section - II

Question No 6

a-----

Solution:

Suppose:

Three candidates A, B and C

$$\text{vote of A} = 15000 \text{ (winner)}$$

$$\text{" " B} = 10000$$

$$\text{" " C} = 8000$$

To find Percentage of total vote
of winning candidate A.

$$\begin{array}{r} 15000 \\ 10000 \\ 8000 \\ \hline 33000 \end{array}$$

$$\text{first find total vote} = 15000 + 10000 + 8000 \\ = 33000$$

$$\therefore \text{Total \% of winning candidate} = \frac{\text{Vote of winning candidate}}{\text{Total vote}} \times 100$$

$$= \frac{15000}{33000} \times 100$$

$$= \frac{1500}{33} \times 100$$

$$= 45.4\%$$

Percentage of winning candidate is 45.4%

$$\begin{array}{r} 45.4 \\ 11 \overline{) 500} \\ \underline{44} \\ 60 \\ \underline{55} \\ 5 \end{array}$$

$$\begin{array}{r} 3\frac{4}{5} \times 100 \\ \hline 340 \\ \hline 3\frac{4}{5} \times 10 \\ \hline 34 \\ \hline 3\frac{4}{5} \times 1 \\ \hline 34 \end{array}$$

$$\frac{10}{10} \times 6$$

b. -----

Ratios of angles of triangle
= 3:4:5

Find each angle = ?

Soln:

Total all the ratios = $3+4+5 = 12$

As total of angle of triangle = 180°

To find first angle = $\frac{\text{Given ratio}}{\text{Total ratio}} \times 180^\circ$

$$= \frac{3}{12} \times 180^\circ$$

$$= 3 \times 15 = 45^\circ$$

$$\begin{array}{r} 3 \times 180 \\ 12 \\ \hline 4, 45 \\ 3 \times 180 \\ 12 \\ \hline 8, 2, 15 \\ 3 \\ \hline 45 \end{array}$$

To find Second angle = $\frac{4}{12} \times 180$

$$= \frac{4}{12} \times 180$$

$$= 60^\circ$$

To find third angle = $\frac{5}{12} \times 180$

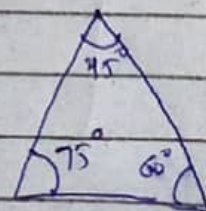
$$= \frac{5}{12} \times 180 = 75^\circ$$

$$= 75^\circ$$

$$\begin{array}{r} 1 \\ 75 \\ 45 \\ 60 \\ \hline 180 \end{array}$$

Total angle = $45^\circ + 60^\circ + 75^\circ$

$$= 180^\circ$$



C-----

Soln:

Each group = 4 boys and 6 girls
 = 4 + 6 = 10 members

Of girls = 102

No of boys req = ?

To find boys = $\frac{\text{Min no of boys req} \times 102}{\text{Total members}}$

~~= $\frac{24 \times 102}{10}$~~

= $\frac{24}{5} \times 102$

The boys need 41 and girls need 102 to manage 4:6 of the group members.

4 x 102
 42
 102
 42
 144
 144
 24 x 10
 102
 51
 4 x 102
 36 x 10
 102
 51
 6 x 102
 51 x 5
 255
 151
 24 x 102
 102
 51
 102
 102
 51
 102
 102

d----- Ratio of A & B = 6:7
After 5 year

$$\text{Ratio} = 7:8$$

$$\text{For present age} = 6 \times 7 = 42$$

$$= \frac{6}{7} \times 42$$

$$\text{For } A = \frac{6}{7} \times 42$$

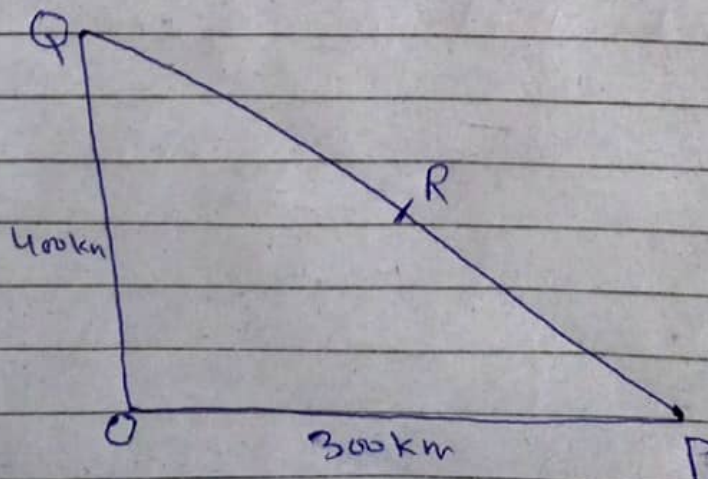
$$\boxed{A = 36}$$

$$\text{For } B = \frac{7}{8} \times 42$$

$$\boxed{B = 49}$$

Question No 7

a-----



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By applying Pythagoras theorem.

$$(R)^2 = (B)^2 + (P)^2$$

hyp = ?

Base = 300 km

Perp = 400 km

$$(h)^2 = (300)^2 + (400)^2$$

To remove square take square root on both sides

$$\sqrt{(h)^2} = \sqrt{(300)^2} + \sqrt{(400)^2}$$

$$h = 300 + 400$$

$$R_{yp} = 700$$

$$\overline{QP} = 700 \text{ km}$$

As R is at center so Distance
of \overline{QR} is

$$\overline{QR} = \frac{350}{700} = \frac{1}{2}$$

$$\overline{QR} = 350 \text{ km}$$

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d----

Average age of three boys = 15 years

if Age in ratio = 3:5:7

find the youngest boy age =

$$= 3 \times 5 \times 7 = 105$$

$$\text{Youngest boy} = \frac{3}{15} \times 105 = \boxed{21}$$

$$\text{Middle boy} = \frac{5}{15} \times 105 = 35$$

$$\text{Elder boy} = \frac{7}{15} \times 105 = \frac{7 \times 7}{3} = 49$$

$$= \frac{21 + 35 + 49}{3}$$

$$= \frac{105}{3} = 35$$

youngest boy age is 21

$$\begin{array}{r} 3 \overline{) 105} \\ \underline{9} \\ 15 \\ \underline{15} \\ 0 \end{array}$$

$$\begin{array}{r} 3 \times 3 \\ \hline 9 \\ \hline 9 \end{array}$$

$$\begin{array}{r} 3 \times 35 \\ \hline 105 \\ \hline 105 \end{array}$$

$$\begin{array}{r} 21 \\ \hline 21 \\ \hline 42 \end{array}$$

$$\begin{array}{r} 69 \\ 35 \\ 21 \\ \hline 125 \end{array}$$

$$\begin{array}{r} 4 \\ 3 \overline{) 147} \\ \underline{12} \\ 27 \end{array}$$

$$\begin{array}{r} 49 \\ 35 \\ 21 \\ \hline 105 \end{array}$$