

Part II
Sec I

Q# 5

(a)

Food Preservation:-

Food preservation means a method which will prove beneficial for healthy the maintenance of the freshness of food these methods will preserve the food from various bacterias etc.

Methods of the preservation of food.

There are various methods which will prove beneficial for the preservation of food.

Drying:

It is a method of food preservation in which we dry the food in moderate temperature. The water removes from the food in this way. Then there is

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is no space for the existence of bacteria.
Then the food preserve from any kind
of bacterial activities.

Freezing:

The food preserve from various
activities through immediate freezing.
When the food freeze at a low
temperature then it will save for
longer time. The freshness of the food
will remain but some food like
meat will change its color if it will
freeze for longer time.

Boiling:

Some food preserve through the
method of boiling. Milk boils at
least 15 minute at high temperature
then the bacteria will kill but
this milk should use within days
we cannot store it for months in this
way.

Acidic method:

In this method some
food preserve through acidic method.

Acid kills the germs and does not allow bacteria to raise their growth. It kill the bacteria and preserve food from any kind of bacterial activities.

Pickle Example:

Pickle

Through liquid:

Liquid is a preserving method which is the combination of water and sugar or water and salt. This liquid is thick and preserve food from any kind of bacterial activities.

Industrial method:

Some industries use manufacturing method for preserving food. This method preserve food from any through various processes which will save the freshness and quality of food.

Q (b)

What is milky way:

Milky is a type of galaxy. It is an elliptical type

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type of galaxy. It consists of stars, planet, dwarf planet, black hole, matter and other celestial objects like asteroids and meteoroids. Our Sun is our star and earth is our planet, are also a part of this galaxy.

How dark matter is related to galaxies?

Dark matter has very great strength of energy. Nothing can be escaped from it. It consists of the dead bodies of many stars. No one can predict its formation. When the star of galaxy has turned to its last stage it will convert into nebula or if it has larger size then it will turn into black hole. The Dark matter is the exist in center of galaxy.

Different parts of galaxy

The center of galaxy consists of dark matter or black hole. When the star ^{reaches} turns its last

last stage it will turn into dark matter.
 surround of the galaxies are consisted
 of the various types of stars.
 these stars have their own planets
 and dwarf planets.

(c)

Solar Eclipse

Lunar Eclipse

Introduction It occurs when the moon comes between the sun and the earth then the sunlight cannot reaches in the earth.

This phenomena occur when the earth moves and comes between the moon and sun and it blocks sunlight.

duration It occurs for few minutes

It may occurs for many hours

→ It does not safe

Humans For Human eye cannot see it directly without wearing glasses.

Human can see this phenomena without wearing glasses. It occur

Occurance It occur twice time in a year.

For more than twice time

period Complete solar eclipse

Complete lunar

Types

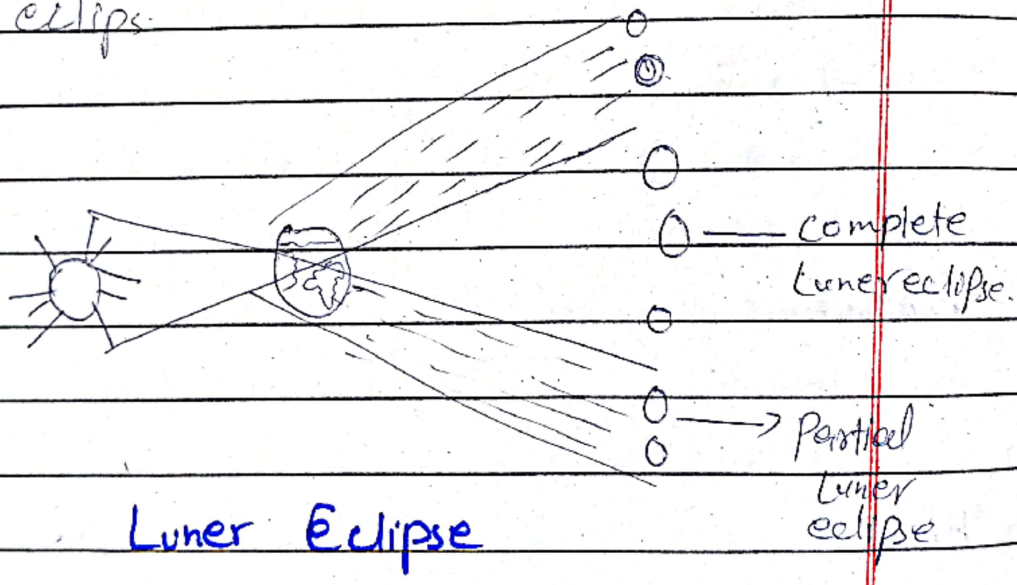
partial solar eclipse occur. Complete solar eclipse will occur during April in USA after many years according to NASA.

Lunar eclipse, partial lunar eclips can be observed

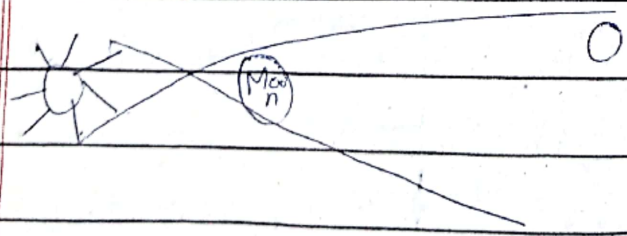
Phenomena

Belly beads, diamond ring effects are the phenomena which occur during solar eclips.

Red blood moon are phenomena which can be obser.

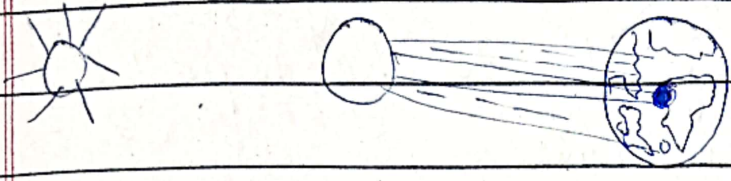


Lunar Eclipse



(b)

Introduction:



Solar eclipse

Q#3

(a)

Introduction

According to UN report 3rd July of 2023 was considered the hottest day. The temperature has raised 1.5°C from the previous recorded temperature.

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

Problems or impacts of Global warming:

The rising temperature impacts on the developing although they emit less than 1pc of CO₂. While they are facing floods, droughts, and food scarcity. COP28 discusses the

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hurdles which developing countries are facing due to the impact of global warming:

Economic problems:

The economy of developing country is not too strong as the developed countries have. They have not too much money to spend on the rehabilitation of the effectees of global warming.

Absence of modern technologies

The developed countries use modern technologies and invent various methods for combating the challenge of Global warming. Whereas developing countries does not have modern technology which will prove helpful for combating the effect of global warming.

Energy crisis:

The developing countries is facing greater crises of energy rather than developed countries. They

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have to use fossil fuels for completing their energy demands.

Turnout towards renewable energy source:

The developing countries are facing greater challenge in the form turning towards renewable energy sources. These countries do not have proper source of economy. Their economy is too weak. Therefore it is quite difficult for them to turn towards the renewable energy resources.

Solution for challenges

COP 28 tried to resolve the problems by establishing establishing fund for those countries which are affected by climate change.

(b)

Introduction:

A balance diet means a diet which contains proper amount

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carbohydrates, vitamins, iron, minerals and lipids. It fulfills the requirement of body which we need.

Importance of balance diet:

A balance diet has great importance because it fulfills the needs of our body. If various types of diseases will occur if our body do not take the proper amount of nutrients.

Diseases:

If we do not take proper amount of nutrition then we will may affect from the malnutrition. but if we will take more then we will suffer from Obesity and Artherosclerosis types of diseases.

Requirement of diet:

Every person cannot take the equal amount of diet. It may varies according to age, gender and type of work which a person is doing.

Age/Gender	Requirement of Energy
Children	2000
Women who do not work	3000
Women who work	3500
Men who do not work	4000
Men who does work	4500

(c)

Introduction:-

Machine learning is the subset of artificial intelligence. It can do work like men and performs well than men. The quality and quantity of work is much more better than human beings.

Revolution in the -Present world.

(a) Industrial level:

Machines are doing good work than men. They take the place of human labour. Through machines industrialists take more qualitative and quantitative

{ 0, 2, 6, 12, 20, 30, 42 }

production:

Agricultural Field:

Through the help of machine the farmer produce more foods and earn more profits

In Medical Field:

In the field of medicine it revolutionizes the brings great revolution. As the patient now can check their cholesterol level at home. The automation in the field of medicine has brought great revolution.

Defense:

Through the use of AI's subset machine the countries are now defends their country in a better way than previous era. Through the help of Gps the country can detect the activities of their enemy.

Transportation and domestic level

AI has brought great revolution in the field of transportation. With the help of Gps a person can detect his vehicles if he lost, ~~at~~ if we look at domestic level then we observe that many works are doing at machine.

SECTION-II

Q# 8

(c)

- (v) Holiday (iv) London
- (ii) GARDEN (i) RIGHTS
- (iii) MOSTACH

(b)

(iii) {1, 7, 15, 25, 51}

{1, 7, 15, 25, 37, 51}

(iv) {0, 2, 6, 12, 20, 30, ?}

{0, 2, 6, 12, 20, 30, 42}

$$\{48, 24, 72, 35, 108, 2\}$$

$$\{48, 24, 72, 35, 108, 143\}$$

$$\{30, 29, 27, ?, 20, 25\}$$

$$\{30, 29, 27, 25, 20, 15\}$$

$$\{4, 16, 36, 64, ? 144\}$$

$$\{4, 16, 36, 64, 74, 144\}$$

(a)

Solution.

$$89 + 91 + 93 = 273$$

(d)

Mother's age = $6x$ older.

Brother's age = $2x$ older.

Sum of ages = 72

Let Sara's age = x .

$$= 6x + 2x + x = 9x$$

$$\text{Mother's age} = \frac{6x}{9x} \times 72 = 48$$

$$\text{Brother's age} = \frac{2x}{9x} \times 72 = 18$$

$$\text{Sara's age} = \frac{x}{9x} \times 72 = 8x$$

$$\text{sum of all ages: } 8x + 16x + 48x = 72x$$