

(SECTION - B)

QNO: 3

i) Define ceramics. Give properties and applications of ceramics?

Ceramic:

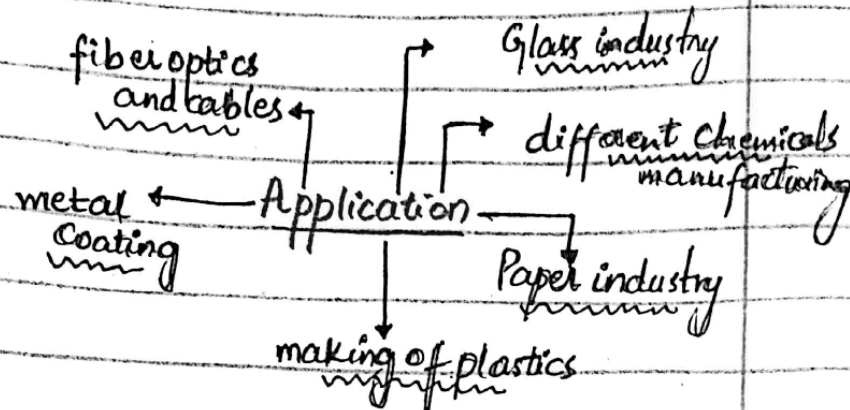
Ceramics is defined as:

"Organic substances that is made up of metal and non-metal and shape by heating at a high temperature"

Properties:

- i) Ceramic materials are durable -
- ii) Act as a good source of electricity production and have high electrical conductivity.
- iii) Ceramic materials have high resistance capacity -
- iv) Soft after melting at a high temperature -

Applications of ceramics:



Part b:

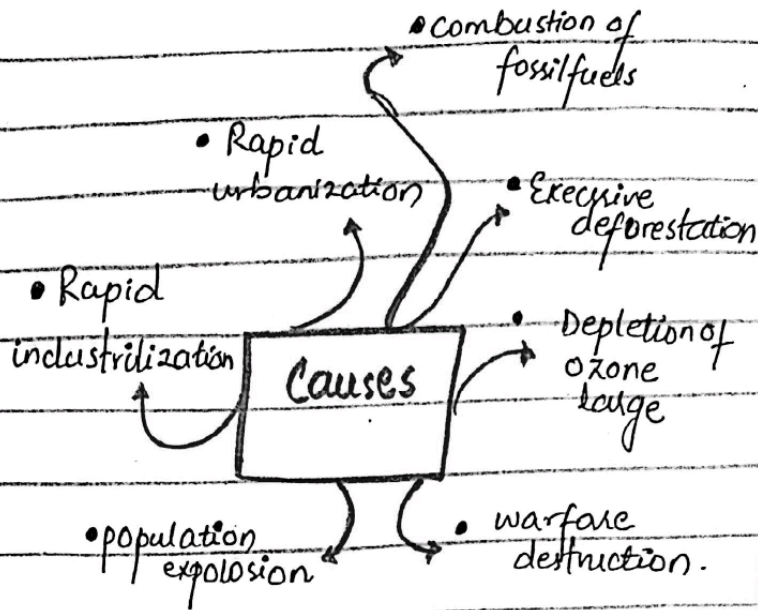
How global warming can be reversed?

Global warming:

Global warming is defined as follows:

"An average increase in the temperature of the earth's surface is called as global warming".

Causes of global warming:



Controlling Measures:

i) Increase in forest cover:

Forest are the main source from where the mostly CO_2 is absorbed.

Increasing forest cover reduced the concentration of CO_2 and control the increasing of temperature.

↳ As per the report, 2 million hectare tonnes of trees have been cut down in a decade.

↳ In context to Pakistan, it only have 4.5% forest cover (requirement atleast 25%)

ii) Strict implementation of International agreements:

Many international agreements have been signed like Kyoto protocol, Montreal, Paris but none of them is strictly followed.

iii) Promotion of SDG's:

The promotion of sustainable developmental goals helps the world to address the problem of climate change.

iv) Ban of Ozone depleting Substances Chemicals:

Chemicals like CFC's, HCFC's and many more deplete the ozone layer more over it also releases CO_2 that contribute to global warming.

v) Shift towards renewable energy:

As the need of energy increasing day by day resulting into more combustion of fossil fuels that results in global warming. So shift toward renewable energy reduced the risk of global warming.

Part c:

Define the following with examples:

i) Food Additives:

"Food additives are coloring and flavoring agents that added to the foods to enhance its appearance and texture -"

Example:

- a) Sweetness → caramel
- b) flavoring agents → vanilla
- c) coloring agents → Food colors

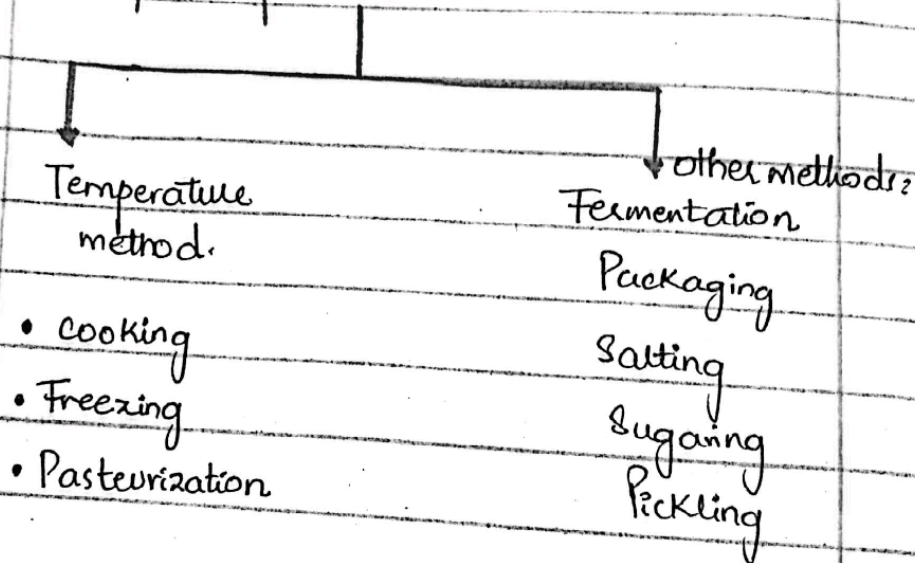
ii) Food Preservatives:

Food Preservatives are those substances that added into the food to prevent it from spoilage.

Examples:

- a) flavanoids and antioxidants
- b) Food additives

Different Methods is used for food preservation:

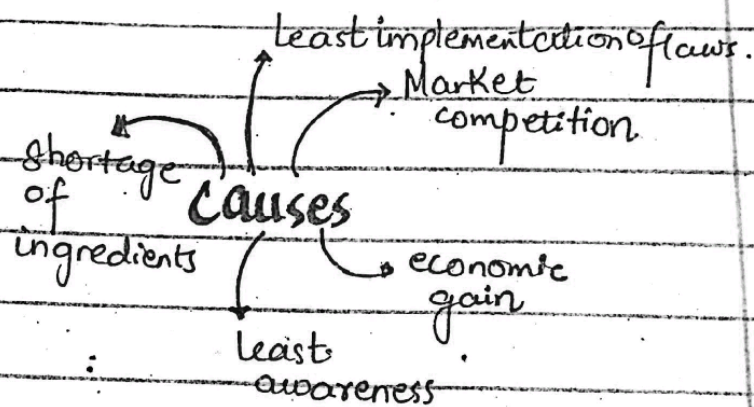


iii) Food Adulteration:

"Food adulteration is the process in which the quality of the food is compromised in order to achieve some economic gain"

Example:-

- Mixing of Water in milk -
- Mixing of chemicals to enhanced textured of yogurt

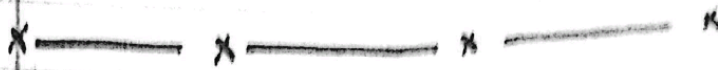


iv) Food contamination:

"It is a natural process by which the food is spoiled or contaminated."

Causes:

- Biological causes - yeast, bacteria etc.
- Chemical reactions in the presence of
- Light.
- High temperature and moisture.
- Open environment.



Question No: 02

Part A:

Big Bang Theory:

Universe

universe is defined as "everything around us".

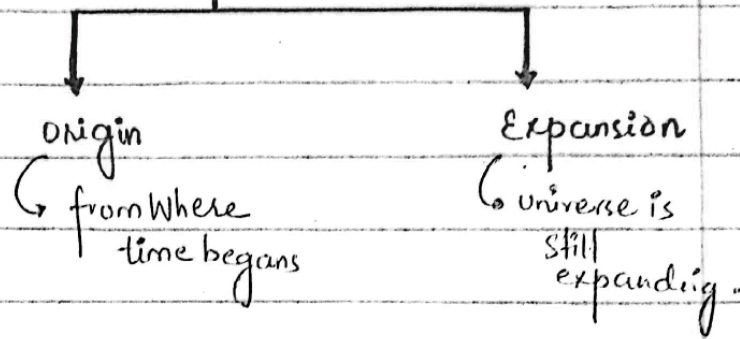
According to Big Bang:

universe began from the point of singularity.

Singularity:

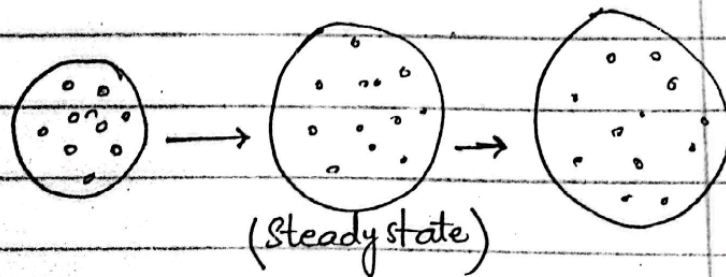
It is a definite point from
Where, time and space begins -
→ Universe formed about 3.7 billion
years ago -

Hubble theory



Steady state theory:

This theory states that universe
is steady and not expands
actually -



Evidences Shows that universe is expanding:

- 1- Cosmic microwave radiations
- 2- Light Shift (Red, Blue).

Part b:

What is unbalanced diet? How it effects the healthy living?

Unbalanced diet:

It is defined as:

"The diet which contains misapropriate portion of a essential nutrients".

Effects:

It disturbs the natural life cycle of every portion part of the body resulting in imbalance -

ii) High carbohydrate intake leads towards obesity & cholesterol problem -

iii) Increasing portion of proteins in the diet ultimately leads towards the heart problems -

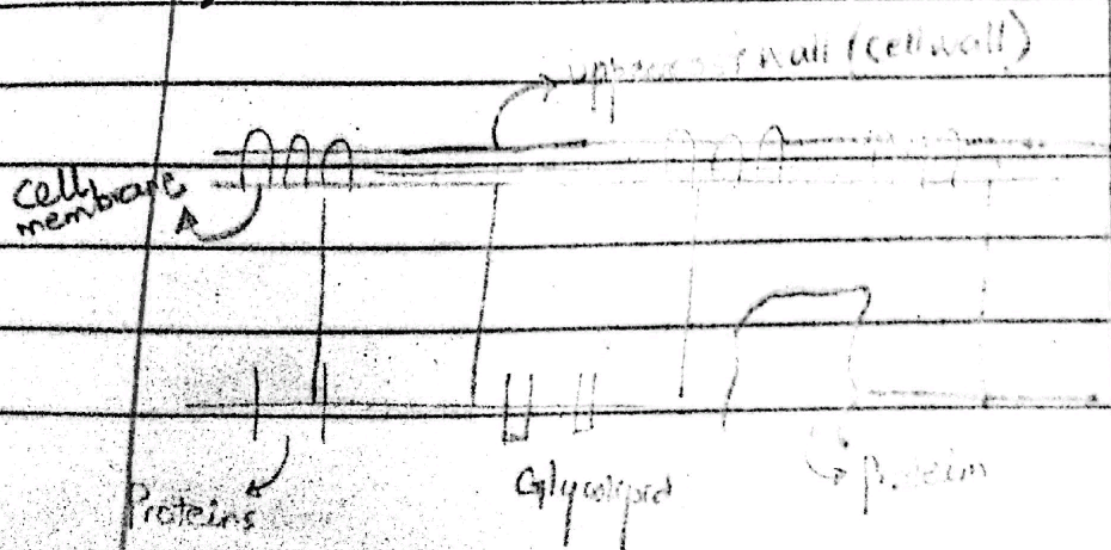
iv) It also causes hormonal imbalance in the body -

v) Leads towards the mental problems -

Part C:

Structure and function:

i) Cell wall & cell membrane

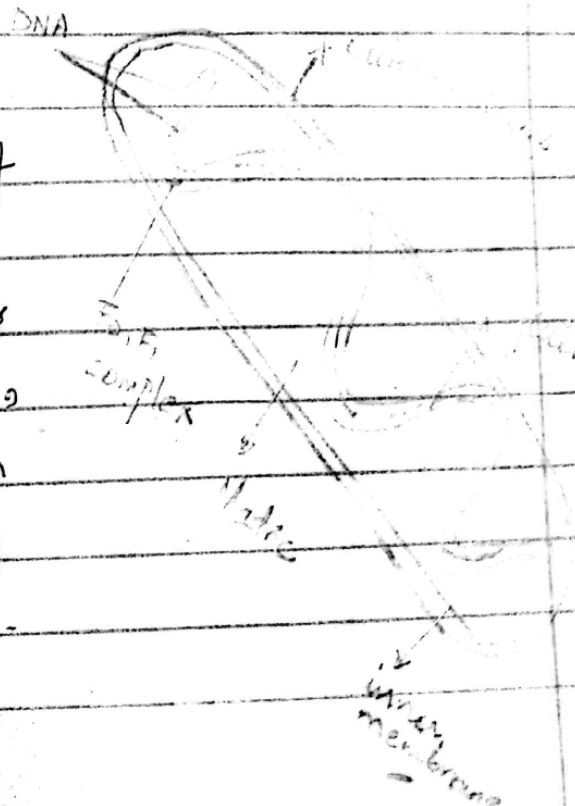


function:

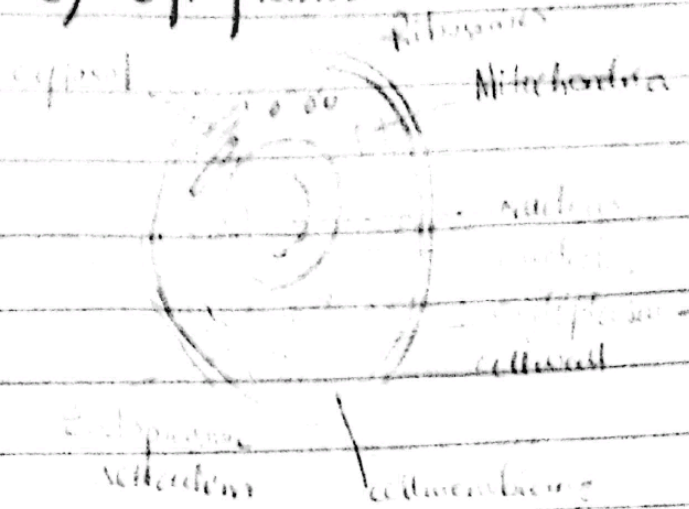
- i) permeability
- ii) Exchange of food material
 - a) phagocytosis
 - b) pinocytosis
 - c) exocytosis
- iii) Metabolism
- iv) Transportation of fluid
- v) Removal of extra waste material
- vi) protection.

b) Mitochondria:

- Also called as Power house of the cell.
- Responsible for metabolism, transportation and energy Production.



c) Cytoplasm:



Function:

- i) Streamline movement
- ii) It contains all the organelles and work to balance all at a time-
- iii) Glycolysis occurs in cytoplasm.

x ——— x ——— x ——— x.

(SECTION B)

Q - No 6

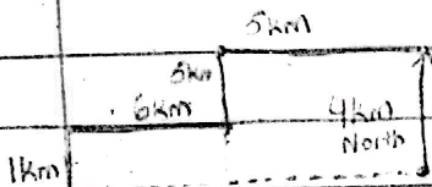
Sum

A = The correct arrangement of the house
is : D B (A) E C
 ↓
 middle

Part

$$B =$$

W4



- i) 16 km
- ii) left
- iii) left
- iv) Right

C: Option NO: SKIRT, COAT, BLOUSE, SWEATER.

D: Triangle: 26 triangles

Q No: 6

Part D:

$$\text{LCM} = 48$$

$$\text{Ratio} = 2:3 \rightarrow \frac{2}{3}$$

The numbers are ~~8~~ 16 and 24 and

Sum is equal to 40-

Part a:

"Her granddaughter is the only daughter of my brother" -

Women related to Ahsan is: Mother