

Part (c)

Explain the following weather variables:
Temperature, Pressure and Humidity

Weather:

"Weather conditions of an area
for short period of time."

Following are factors of weather:

1. Temperature
2. Pressure
3. Humidity
4. Precipitation
5. Wind
6. Cloud

Temperature:

"Temperature is the degree
of hotness or coldness
of a body."

It is measured by above freezing
point of water (0°C) and below boiling
point of H_2O (100°C). High temperature
constitutes hot weather and low temperature
constitutes low cold weather.

Pressure

"The force exerted by air on unit area of earth is called pressure"

This pressure gives path to the motion of air which in return forms weather.

Humidity

"Humidity measures the amount of water vapours in the air."

High Humidity means high rate of evaporation and transpiration. It lowers temperature and brings frost down.

General Science

Question #02

Part (B)

What are rocks? Give its types and describe rock cycle?

Rocks:

Rocks are: inorganic solid substances which are made up of one or more than one mineral.

Types of Rocks:

On the basis of formation of rocks, it has three types:

1. Igneous rocks
2. Sedimentary rocks
3. Metamorphic rocks

Igneous Rocks:

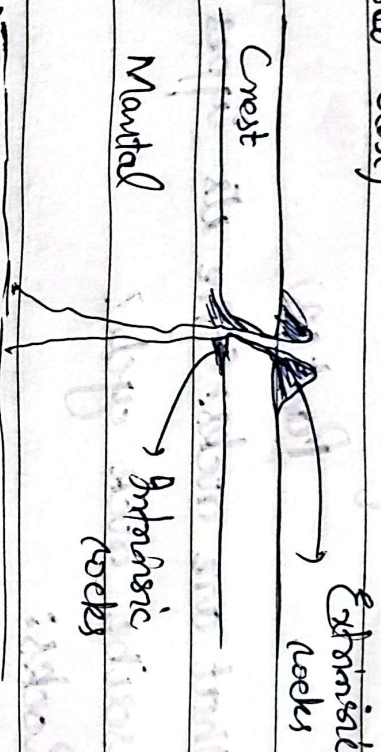
Igneous rocks are formed when molten lava or magma comes out and gets cool. They can be formed on earth's crust or below crust. On the basis of which it can be classified as:

1. Extrusive rocks (which are formed

from magma energy is obtained from

above (east)

2. Intrusive rocks (which are formed below (east))



Sedimentary Rocks:

When igneous rocks undergo some biological, chemical or physical change then some of their parts are shifted by wind and water and the rocks formed from this process are called sedimentary rocks. Following are ^{these} types of sedimentary rocks.

1. Organic / Biological Sedimentary rocks
2. Chemical Sedimentary rocks
3. Clays Sedimentary rocks.

Metamorphic rocks:

These are the rocks which are formed due to high pressure and temperature changes in other rocks. Usually its meaning is without shape. They can be classified as:

- 1. Foliated rocks (having bands)
- 2. Non-foliated (having no bands)

Rock Cycle

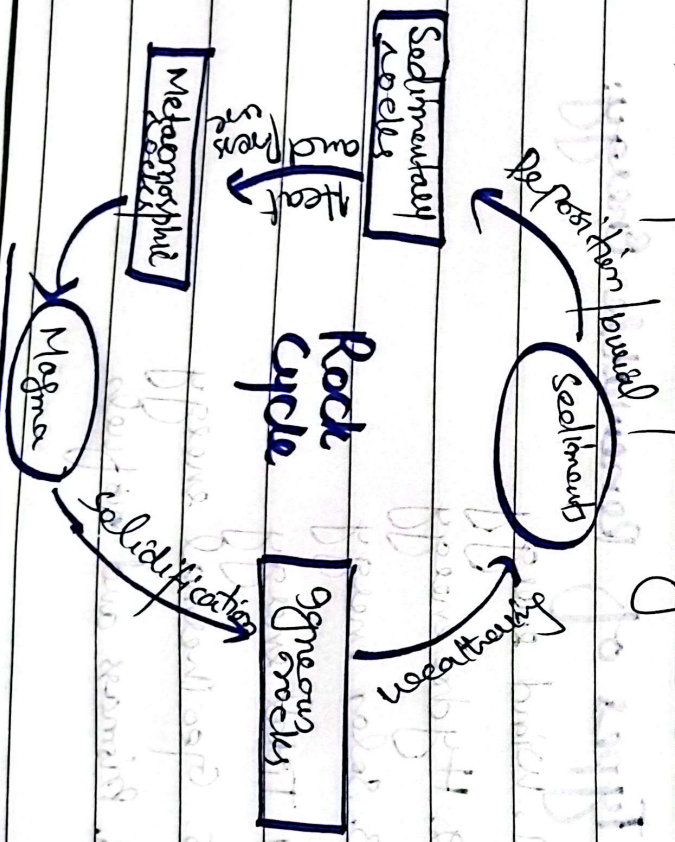
"It is a cycle in which one form of rock is converted into another by cyclic way."

Since, these types of rocks; igneous, sedimentary and metamorphic rocks are interconvertible.

Starting from lava, it converts into intrusive or extrusive rocks due to

high temperature inside the core then these rocks are converted into biological,

chemical and clays; sedimentary rocks which in return changes into foliated and non-foliated metamorphic rocks and the process repeats again.



Give importance of renewable energy with respect to environment and explain solar energy?

Renewable Energy:

Energy is ability of a body to do work.

$$W = \Delta K.E + \Delta P.E = \Delta E$$

"Renewable energy is energy which is obtained by renewable

sources. Those sources which

are replenished on human timescale and can be obtained

in infinite quantities and can be obtained over

materially after they are consumed once."

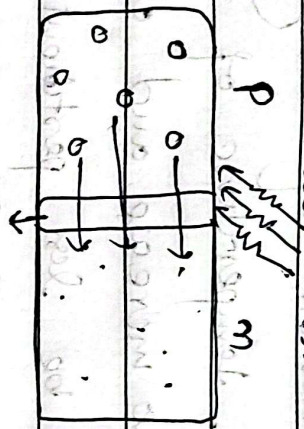
Types of Renewable Energy:

1. Wind energy
2. Hydro energy
3. Solar energy
4. Tidal energy
5. Geothermal energy
6. Biomass and biofuels

Importance of Solar Energy:

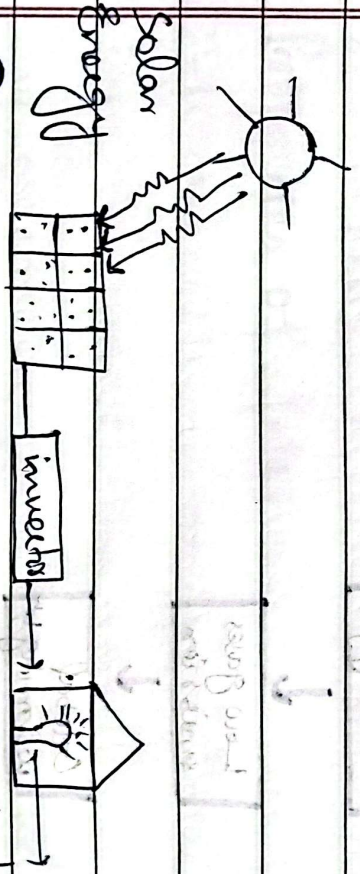
Solar energy is a types of energy which is obtained from solar radiations either through solar light or heat.

To convert solar energy into electrical energy solar cells are used, which are made up of Si Semiconductors, called photovoltaic cells.



They work either on active mode or passive mode.

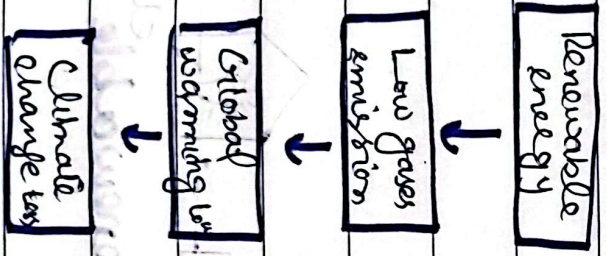
Model:



Importance of Renewable Energy:

Renewable energy is obtained from

These natural resources which are not bound to environment they do not emit harmful gases like CH_4 , CO_2 , CO , SO_2 and NO_x which deteriorate the natural composition of the atmosphere and produces effects like Global warming and green house gas effect. When emission of these gases will be smaller, temperature of the globe will not increase and climate change will be less pertinent to see. So, a major shift is needed towards renewable energy for saving the environment.



Differentiate between saturated and unsaturated fats and give its importance?

Fats :

Fats are lipid, which are very essential for growth and proper functioning of body. They are the stored energy source of the body.

FATS Types:

These are three types of fats.

- 1. Saturated fats
- 2. Unsaturated fats
- 3. Trans fats

Properties of fats:

- 1. Fats are solids at room temperature.
- 2. They are derived from animals.
- 3. They are soluble in organic compounds and insoluble in water.
- 4. They are stored in the body.
- 5. Banaspathi glucose etc.

Saturated Fats

1. These fats contains single bond between them.
2. They have low melting and boiling points.
3. They are obtained from animals.
4. They are solids at room temperature.
5. Kamagoshi ghee etc.

Unsaturated Fats

- They have at least one double or triple bond between them.
- They have high melting and boiling points.
- They are derived from plants.
- They increase HDL and lower LDL.
- Soyabean oil etc.

Importance of Fats:

1. Fats provides protection to the body organs.
2. They are used as stored energy for body.
3. They keep body warm and heated.
4. They are used for body strength and growth.
5. Milken shield of nerve cells is protected by fats.

Question #6a)

Part d)

Water Soluble Vitamins

Vitamins:

"Vitamins are substances which are essential for normal functioning of human body and their deficiency leads to serious diseases."

Types of Vitamins:

There are two types of vitamins.

1. Fat soluble vitamins (A, D, E, K)
2. Water soluble vitamins (B, C)

Water Soluble Vitamins:

"These vitamins which are soluble in water" it includes B and C vitamins.

Vitamin B is a complex vitamin and it is further divided into B1, B2, B3, B5, B6, B7, B9, B12, whereas Vitamin C is also called Ascorbic Acid

Day: _____

Date: _____

Vit C (Ascorbic Acid)

Present in Tomato, Guava, orange, etc.

Deficiency causes Scurvy.

B1 Thiamin

Beri beri

B2 Riboflavin

Eye inflammation

B3

Niacin Pellagra

B5

Pantoic acid

B6

Pyridoxine

B7

Biotin

Hair, skin etc.

B9

Folic Acid

Anaemia (required at early stage of preg)

B12

Cobalamin

Vitamin B complex is mainly derived from green leafy products, milk, meat, eggs, milts etc. and mostly they cause anaemia. For a healthy growth of body, all these vitamins are required in specific amount.