

# TEST 1

## Q NO 2:

(A)

### Renewable Energy Resources

Renewable energy resources are those resources that occur naturally and can be replenished any time. They have zero carbon impacts. They are available for the longer time period without any shortage.

### Examples:

The examples of renewable energy resources are

- 1) Solar Energy
- 2) Wind Energy
- 3) Geothermal Energy
- 4) Biogas Energy
- 5) Hydro Energy

Importance of Renewable Energy Resources with respect to Environment:

With respect to environment, the renewable energy has enormous importance.

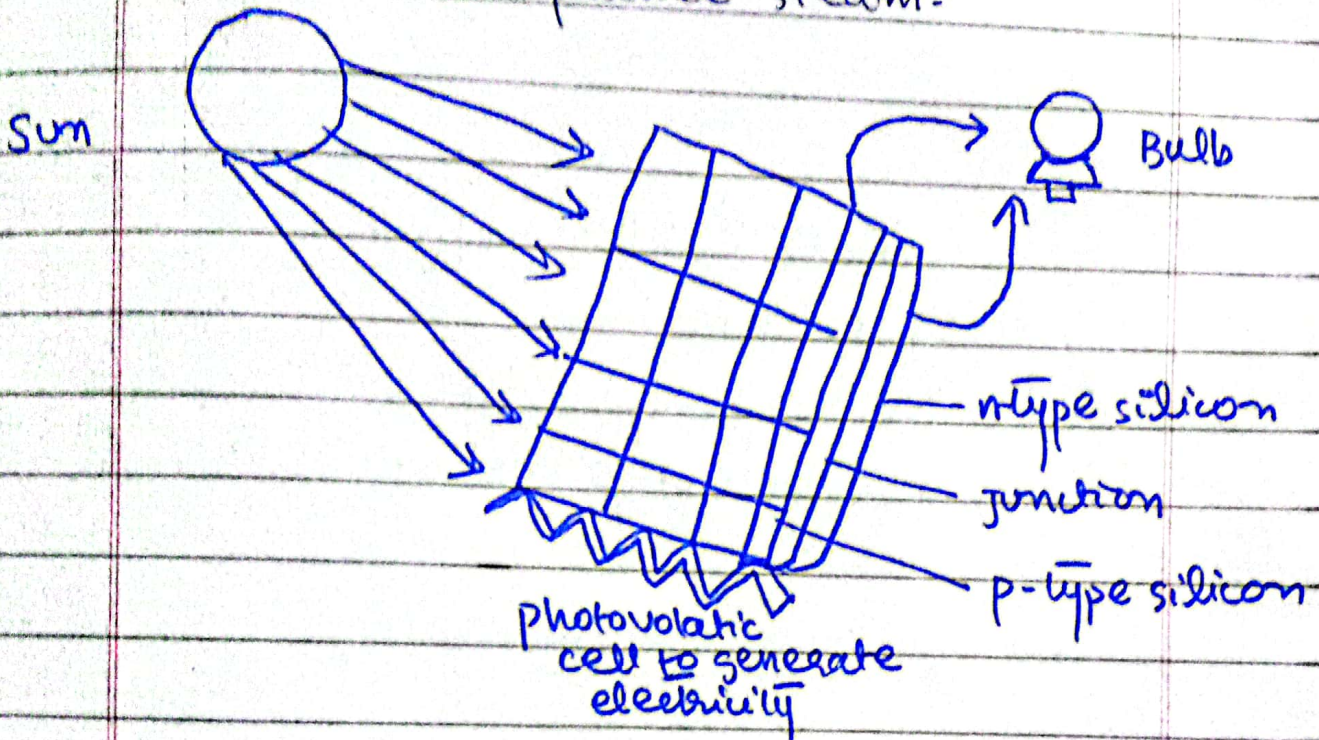
- (i) It is naturally occurring.
- (ii) It can be replenish without any shortage.
- (iii) It is eco-friendly.
- (iv) It has zero carbon-footprints.
- (v) It can reduce air pollution.
- (vi) It can help and control damaging impact of fossil fuels on climate change and global warming.

## Solar Energy:

Solar energy is the energy that comes from the sunlight in the form of heat and sunlight. It is used to generate electricity, heating the water, and cooling the system.

Photovoltaic cells: It generate electricity from the sunlight.

Heating and Cooling technology: It uses the heat of the sun to heat the water and produce steam.



(B)

## Rocks:

Rocks are the naturally occurring solid material with one or two minerals present in it.

## Characteristics:

- (i) It is solid or soft in appearance.
- (ii) It contains minerals, inorganic minerals, and other compounds.

(iii) It has pores in its surface.

(iv) It is either intrusive and extrusive.

## Types:

Rocks has three types

(i) Igneous Rocks

(ii) Sedimentary Rocks

(iii) Metamorphic Rocks.

### (i) Igneous Rocks :

(1) Igneous Rocks are formed as a result of hardening and melting of magma.

(2) It is intrusive and extrusive in nature.

### (ii) Sedimentary Rocks :

(1) The process of weathering damage the structure of rocks and break it.

(2) When a rock breaks, it forms

sediments -

- (3) These sediments when intercut, bind and get composed together then it forms sedimentary rocks.

### (iii) Metamorphic Rocks :

(1) Metamorphic rocks formed when one rock changes into another rock.

(2) Due to intense pressure and heat, a rock loses its original shape and color and get changed into another rock.

The changing of rock is known as metamorphic rock.

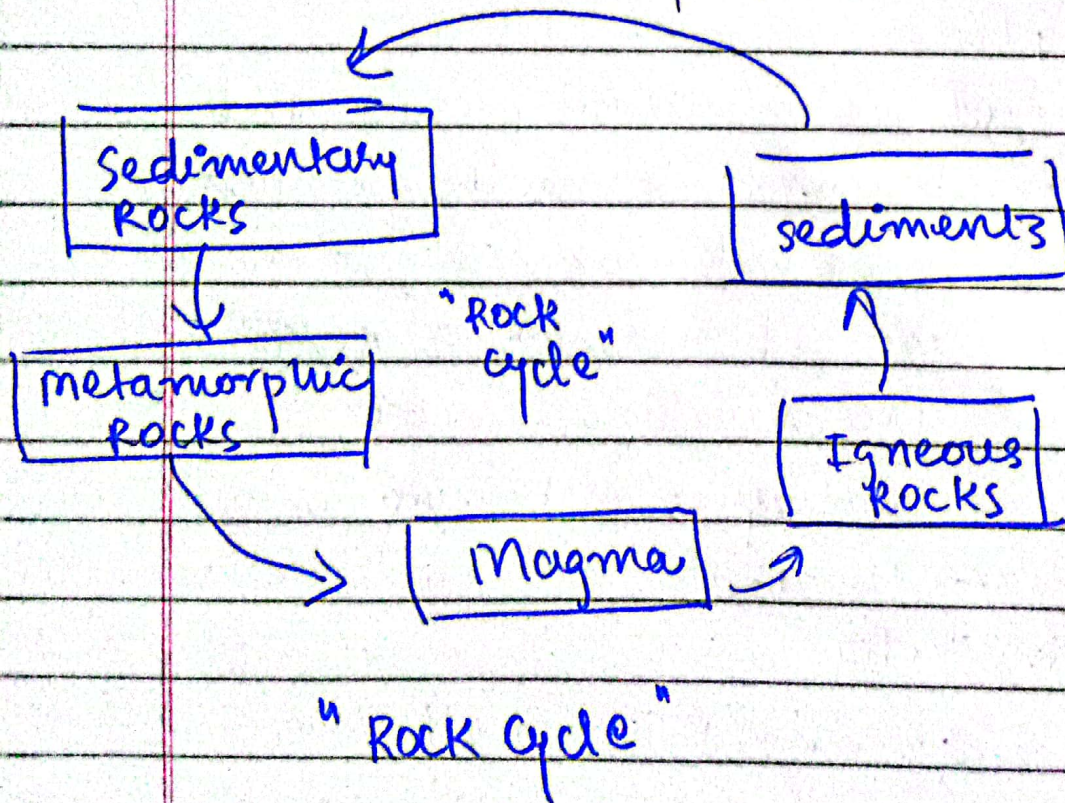
### Rock Cycle :

The formation of a rock is a cyclic process.

(1) When magma erupts from the earth then it either gets

harden or cools down -

- (2) The hardening and cooling of magma forms igneous rocks
- (3) When igneous rocks change into sediments due to the process of weathering
- (4) When sediments join they form sedimentary rocks.
- (5) The heating and pressure forms metamorphic rocks.



(C)

Saturated  
FatsUnsaturated  
Fats

1) It contains no double bond between its carbon atoms. The carbon atom is saturated with the hydrogen.

It contains double bond between the carbon atoms.

2) It is solid at the room temperature.

It is liquid at the room temperature.

3) It can cause the high cholesterol level for the body and heart diseases.

It can control the bad cholesterol & it is good for the heart.

4) It is obtained from the animal based

It is obtained from plant

sources -

based oils -

5) It examples are butter, card etc.

Its examples are olive oil, flaxseed oil, and canola oils.

### Importance of Fats :

- (i) It is the instant and extensive source of energy for the body.
- (ii) It contains fat soluble vitamins necessary for vision, skin, and brain.
- (iii) It is an essential component of the balanced diet.
- (iv) The omega fatty acids 3 is essential for brain development.
- (v) It regulate the metabolism and hormonal balance.

(D)

### Water Soluble Vitamins



Water soluble vitamins are that soluble vitamins that soluble in water. It dissolve in water and are present in very minimal amount in body. The excessive amount of these vitamins removed from body in the form of urine.

### Composition:

It is composed of Vitamin C and vitamin B Complex.

The vitamin B complex consists of B1, B2, B3, B5, B7, B9, and B12 vitamins.

### Sources:

The vitamin C and B complex can be obtained from multiple sources -

(a) meat

(e) vegetables

(b) Eggs

(f) fruits

(c) Dairy products

(g) Red meat

(d) Legumes

(h) Citric products.

## Functions :

- 1) It regulates the metabolic mechanism of the body and gives energy.
- 2) It is necessary for the optimal body functioning and strength.
- 3) It regulates the digestion process of the body.

## Deficiency and Diseases

- 1) The deficiency of Vitamin C leads to the scurvy disease.
- 2) The deficiency of Vitamin B complex causes bone diseases, metabolic diseases, and anaemia.

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(A)

## Vaccines

A vaccine is a biological preparation that stimulates the immune system of the body and helps it fight off the disease.

### Types of Vaccines:

Vaccines have different types that help the body's immune system to fight the disease and give relief.

Attenuated vaccine: An attenuated vaccine is composed of killed bacteria and virus compounds.

Weakened vaccine: It is composed of the weakened pathogens of the bacteria or viruses.

Toxoid vaccines: It is composed of the toxins.

Conjugate Vaccine: It is composed of weakened viruses, bacteria & their components of the proteins.

### Vaccine Administration:

Vaccine can be administered on an individual orally, through injection or intranasally.

### Working of Vaccines:

- 1) Vaccines are administered on an individual before contacting disease.
- 2) It prepares the immune system of an individual to fight off the disease.
- 3) It weakens the impact of the pathogen on the body and saves an individual from getting ill.

### Example of Vaccine:

" Moderna is an example of vaccine that was administered for the prevention of the COVID-19 virus.

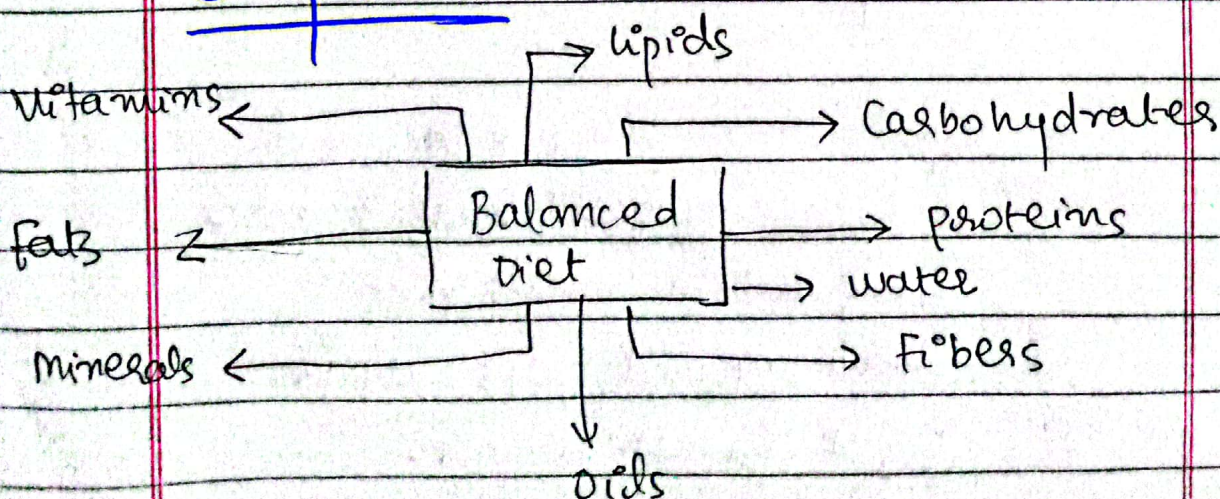
(B)

## Balanced Diet

### Definition:

A balanced diet is a diet with complete nutrient value that contains all ingredients necessary for the proper functioning of the body including carbohydrates, proteins, lipids, fats, fibers, minerals and vitamins.

### Composition:



## Calories Composition :

Carbohydrates	60-70%
Proteins	10-20%
Fats	20-25%

## Merits of Balanced Diet :

(i) Instant source of Energy : A balanced diet provides the instant source of energy. It contains carbohydrates that provides energy to the body.

(ii) Muscle Growth : A balanced diet contributes in the muscle growth. It contains proteins and vitamins that gives muscle growth to the body.

(iii) Boosts Immunity : A balanced diet containing Vitamin B and C along with minerals boost immunity and helps body to fight against illness.

(iv) Improves Digestive Health: A balanced containing fibres improves the digestive health of an individual by reducing the chances of constipation.

(D)

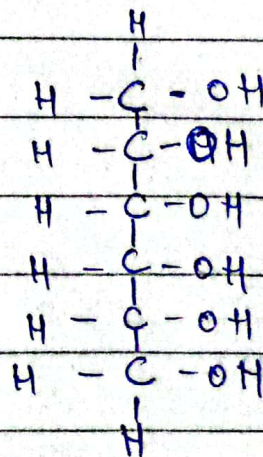
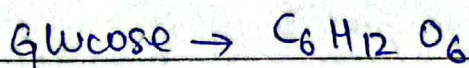
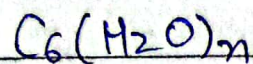
## Carbohydrates

Carbohydrates are the organic sugars that provide body the instant energy. It consists of glucose, sugar, and starch.

### Chemical Composition:

It consists of carbon, hydrogen, and oxygen.

### Chemical Formula:



## Types:

There are three types of the carbohydrates.

- 1) Monosaccharides (Simple sugar)
- 2) Disaccharides
- 3) Poly-saccharides.

## Sources of Carbohydrates:

Carbohydrates can be obtained from multiple sources including

- 1) Vegetables
- 2) Fruits
- 3) cereals
- 4) Dairy products

## Functions of Carbohydrates

