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Q NO: 2

Part: B.

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

**Rocks:**

Rocks are minerals or aggregate of mineral solid mass which are formed from solidification of magma. It is naturally occurring solid mass which are present in the crust and core of the Earth.

**Types of Rocks:**

Rocks are classified into three categories which are igneous rock, sedimentary rock and metamorphic rocks.

i) **Igneous rocks:**

~~They are the~~ They are the primary form of rocks which are formed from the solidification of magma on the surface of Earth. The magma are produced

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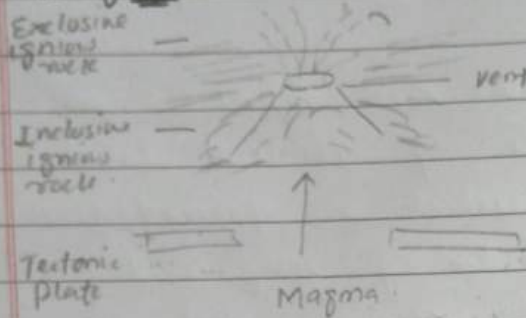
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As a result of volcanic eruption which cold to form igneous rocks.

Example: Granite

Diagram:



**Igneous rocks.**

Types.

Exclusiv igneous rock

Inclusiv igneous rock

ii) Sedimentary rocks:

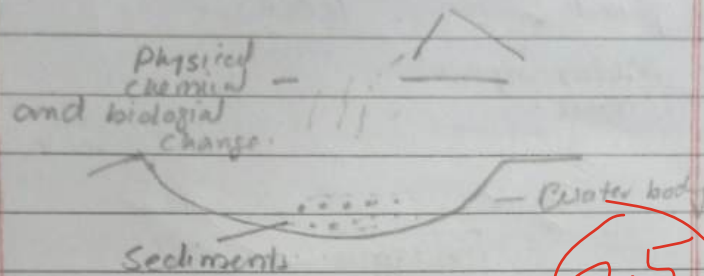
Sedimentary rocks are formed by the process sedimentation. It happens in water bodies in which the igneous rocks are broken down through

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Physical, chemical and biological process. These rocks are collect from the base in form of precipitation.



### iii) Metamorphic rocks:

Meta — Mean — Change

Morph — Mean — Shape.

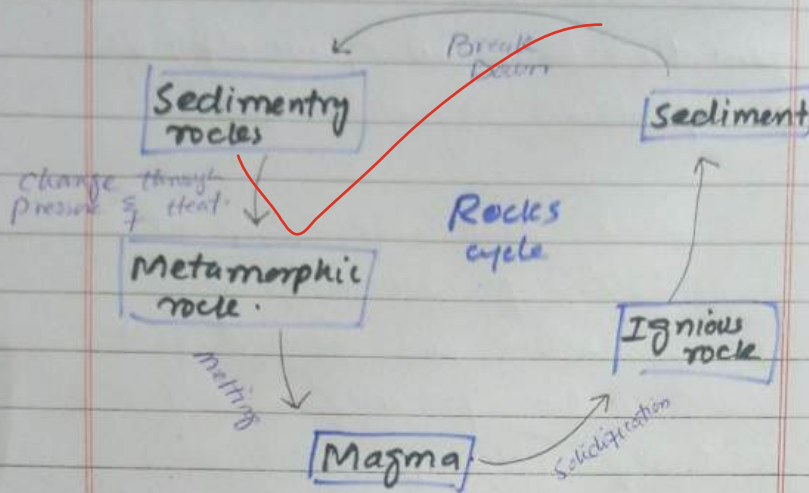
Metamorphic rocks are the types of rocks formed as a result of change in shape of igneous and sedimentary rocks through heating. It exposes to the external and internal pressure and heat. The alignment of hard minerals along the direction of minerals.

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## Rocks cycle:



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Part: A.

## Importance of Renewable Energy resources:

Renewable energy are those source of energy which can be replenished again and again. In simple words, the energy which can be used repeatedly or renewed. Renewable energy resources have many importance in our daily life.

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regarding environmental protection.

### i) Less production of pollutants

Renewable energy sources like wind, turbine, hydro electric power, and solar energy resources have less amount of pollutant generation than non-renewable energy sources to renewable energy have the potential to reduce environmental pollution upto 65%.

### ii) Limited production of heat

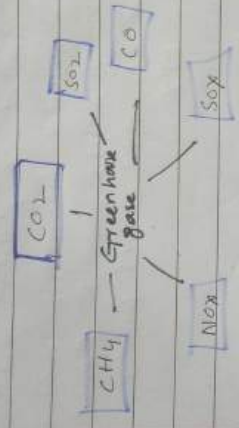
Renewable energy sources generate less amount of heat in atmosphere as compare to non-renewable resource. Use burning of fossil fuels.

### iii) Minimize greenhouse gases

Greenhouse gases are the main cause of environmental pollution. These gases are produced as a result of burning of fossil fuel (oil, gas and coal).

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which contributes about 67% of global warming. In alternate way renewable energy resources have less potential to produce greenhouse gases.



### ii) Solar energy:

Solar energy is the renewable energy resource which solar energy is converted into electrical energy. The solar panel cells are used to generate electrical energy from the sunlight radiation. Solar energy is most reliable and friendly environmental source of energy.

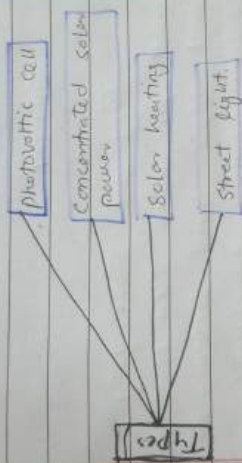
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In the modern world.

## Types of solar systems.



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Part: C

Differentiate between the

Saturated and unsaturated fats:

### Saturated fats

Saturated fats is the

types of fatty acid in which

there is no double and

triple bond in glycerol ring

of carbon atom. It means

that in saturated fatty acid

there is only single bond between

the carbon atoms. It is solid

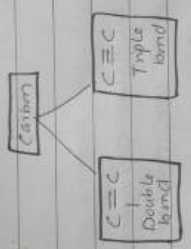
at room temperature and mostly present in animal fat

**Example:**

Glycerol

**ii) Unsaturated fats**

They are those fatty acid in which there is double and triple bond between the carbon atoms of glycerol



Unsaturated fatty acid are present in plants source and become liquid at room temperature. These fatty acid have the properties to be reduced into single bond for its purpose to minimize the amount of fats in animals body



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## Differences.

Saturated Fats	Unsaturated Fats
<ul style="list-style-type: none"><li>• Have Carbon - Carbon single bond</li></ul>	<ul style="list-style-type: none"><li>• May be carbon - Carbon double and Triple bond</li></ul>
<ul style="list-style-type: none"><li>• Solid at room temperature</li></ul>	<ul style="list-style-type: none"><li>• Liquid at room temperature</li></ul>
<ul style="list-style-type: none"><li>• Present in animal: some</li></ul>	<ul style="list-style-type: none"><li>• Present in plants</li></ul>
<ul style="list-style-type: none"><li>• Fat - in nature</li></ul>	<ul style="list-style-type: none"><li>• mostly oily in nature</li></ul>
<p>Example</p> <ul style="list-style-type: none"><li>• Butter</li><li>• Cheese</li></ul>	<p>Example</p> <ul style="list-style-type: none"><li>• Olive</li><li>• Avocado</li></ul>

Q No: 2  
Part: D

Water soluble vitamins:

vitamins are organic substance and essential nutrient necessary for living body for proper functioning. Vitamins are intake as source of food which is classified into two categories.



Water Soluble:

Water Soluble Vitamins are those which are soluble in water. They are vitamin B and vitamin C, the remaining are fat soluble vitamins.

1) Systemic...  
2) Product... of capacity...

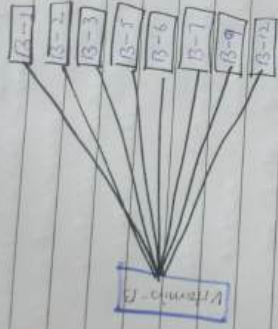
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### a) Vitamin B:

Vitamin-B are water soluble vitamins which are further categorized into



Subsets:

Vitamin-B are present in meat, bean, soy, fruits and fish.

Functions of vitamin-B:

Vitamin-B are the essential for the body to perform several vital functions. These functions are good skin, strong hair, formation of Red blood cells,

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Play important role in body growth and immune system.

### Deficiency of Vitamin-B:

Deficiency of Vitamin-B causes Beriberi (yellow skin), eye disease, Nerve and muscle degeneration, eye irritation, fatigue and skin infections.

### ii) Vitamin-C:

Vitamin-C is water soluble vitamins called as ascorbic acid, play an essential role in wound healing and stop bleeding from the gum.

#### Sources:

Vitamin-C are mostly present in citrus fruit like lemon and orange and also present in Guava.

#### Deficiency:

Vitamin-C deficiency lead to scurvy - major symptom bleeding.

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Q No 13

Part 1

Vaccines:

Vaccines are biological preparations which is used for the purpose to strengthen the immunity. Vaccine contains resemble chemical or aggregate of that microbes which is inactivated and body killed administered to the body to gain immunity against the particular infections.

Types of vaccine:

The following types of vaccines are used to provide immunity against infective agent.

i) Attenuated vaccines

These are inactivated or half killed substance of the infective agent to restore the immune response of the body.

**ii) Killed vaccine:**

These vaccine are killed inactive agent enter into the body to form anti-bodies against the infection in foreign particles.

**Example**

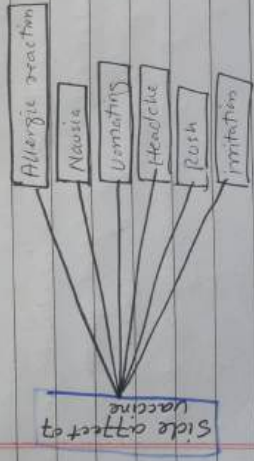
Polio vaccine

**iii) Toxoid vaccine:**

These vaccine which are produced by bacteria as a toxic.

**iv) Conjugated vaccine:**

These vaccine are the part of infective substance administered into the body for the purpose to strengthen the immune system.



1. Cardiac & respiratory system

### Common vaccine



Q No. 13

Part: B

### Balance diet:

Balance - specific amount

Diet - Food

Balance diet is the specific amount of food or nutrient required for the body to perform the daily function in a best manner. Which is called as nutrition. These nutrient are present in every food items in a specific amount which is necessary for the body and every nutrient have its own

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Functions for living systems

## Nutrient

### Macro-nutrient

- Carbohydrate
- Protein
- Lipids
- Nucleic-acid

Macro-nutrient are those

which are need in large quantities while micro-nutrient are required in small amount per protein functioning

### Micro-nutrient

- Minerals
- Vitamins

Merits of balance diet:

### i) Improve health

Balance diet play an important role to improve human health. It prevent body from



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overweighting and disease.

### ii) Strong bone and teeth

Proper amount of calcium and vitamin-D help to maintain strong bone and improve the stability of teeth.

### iii) Provide strength to immunity.

Balance diet have essential role to make immunity strong for the purpose of defense. More strengthen the immune system, more will be the fighting capacity against disease cause agent.

### iv) Prevent obesity.

Balance diet prevent obesity and overweighting due to less intake of fatty foods.

### v) Strong digestive system.

Best practice fortifying of digestive system is also linked with proper intake of food to proper digest them.

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Q No. 3

Part: C

### Weakness of DRM in Pakistan

DRM - disaster risk management stands in the priority of most likelihood to reduce and the impact of disaster. Pakistan DRM have been facing some weakness that are:

#### i) Less financial incentives

to unstable economy Pakistan have adverse impact on disaster risk management. It is because government provide less priority to the DRM due to which they found difficulties in its function.

#### ii) Lack of capacity

There is lack of capacity of provincial and

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Federal Government of Pakistan  
to ensure better disaster risk  
management system.

### iii) Absence of Political will

Absence of political will  
is an another weakness of  
DRM in Pakistan. There is gap  
between the provincial and federal  
Government to maintain the  
well functioning of DRM.

### iv) Institutional weakness:

Political interference in  
institutional work weakens the  
institutional capacity to handle  
disaster and independently.

### v) Lack of Resources

The DRM in Pakistan  
have faced limitation of  
resources to reduce the risk of  
disaster. It is due to weak  
economic system and political  
instability in Pakistan.

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Q No 13

Part: D

### Carbohydrate:

Carbohydrate mean hydrated carbon.

Carbohydrates are organic molecules which are made up of carbon, hydrogen and oxygen to provide instant energy to the body. Carbohydrate act as the source of energy and provide structural support to the body. It has same ratio of C-H with water.

### Types of carbohydrates:

Carbohydrates are mainly divided into three types:

#### i) Monosaccharide:

Mono - mean - one

Saccharide - mean - sugar.

The type of carbohydrates which are composed of single sugar and cannot be further

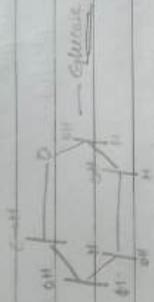
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Class into simple form.

Example:

Glucose and Fructose



ii) ~~Disacchar~~

ii) Oligo saccharides

The type of carbohydrates which are composed on two to ten mono saccharide unit. They are less sweet in taste and can be divid. into simple form.

Example:

Maltose — Glucose + Glucose

Sucrose — Glucose + Fructose

Gelictose — Glucose + Galactose

iii) Poly saccharides

The type of carbohydrate which are made up of many

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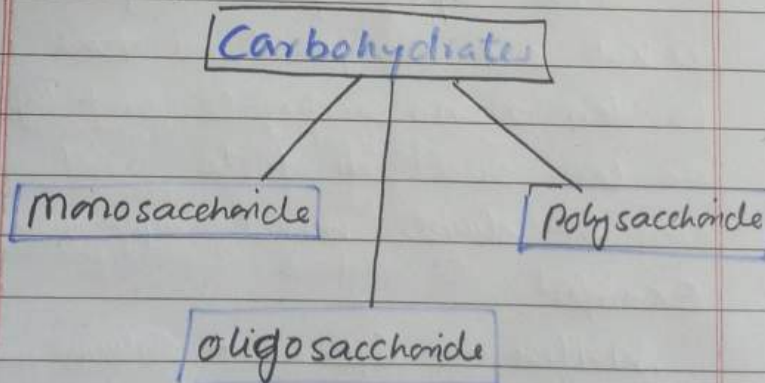
Polysaccharide unit. It plays an important role in the building blocks of cell membrane.

Example.

Pectin.

### Sources of Carbohydrate:

The following are the sources of carbohydrates: milk, potato, Honey, sugar cane etc.



### Functions of Carbohydrates:

Carbohydrate performs the following functions in living body.

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a) Provide energy:

Carbohydrates are the immediate source of energy. 1 gram of carbohydrate produce about 4.1 kcal energy.

b) Storage function:

In animals carbohydrates are stored in the form of glycogen while in plants in the form of starch.

c) Constipation relief:

Carbohydrates contains fibers which help in smooth bowel to relieve constipation.

