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Batch 339

CSS-2020

GSA

Q#3 (Part b)

What are carbohydrates? Classify and give detail of each class along with examples.

Answer

Carbohydrates:

Large group of organic compounds which contains maximum amount of sugar, starch and cellulose like necessary food nutrients.

Like proteins, fats and minerals, carbohydrates are also important nutrient.

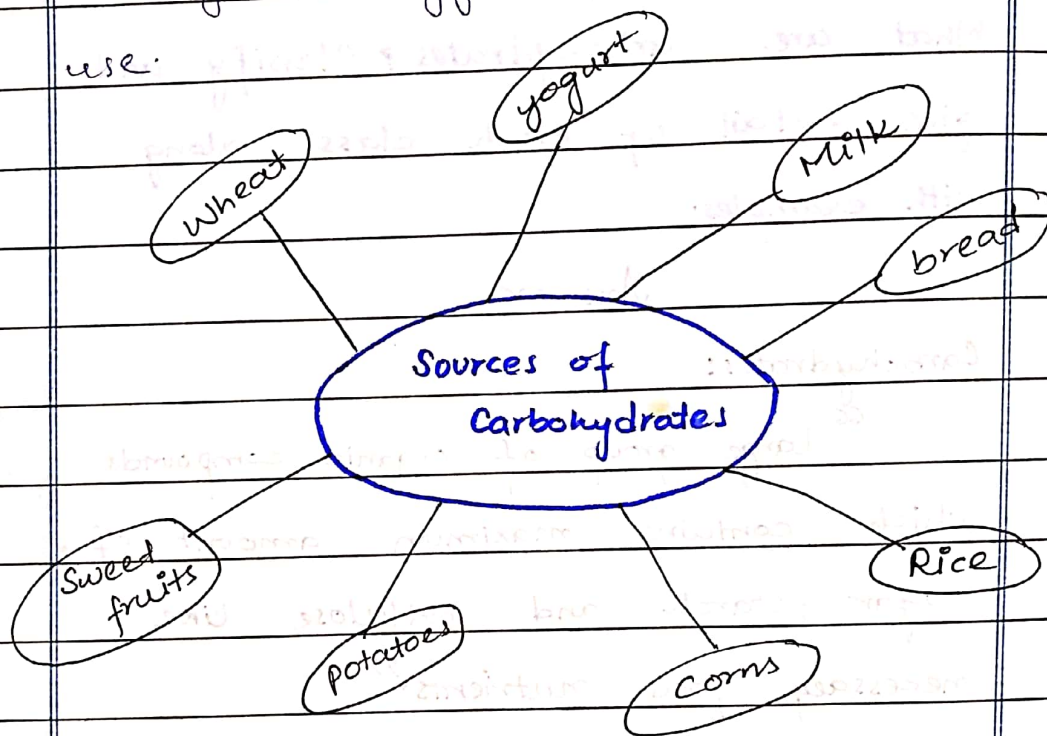
Significance of carbohydrates:

Carbohydrates are main source of energy for the body. It is responsible for mental performance.

Carbohydrates play a significant

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a significant role in circulation of human heart and working of many other organs including kidneys and lungs. They also help in preserving muscles and storing energy for the later use.

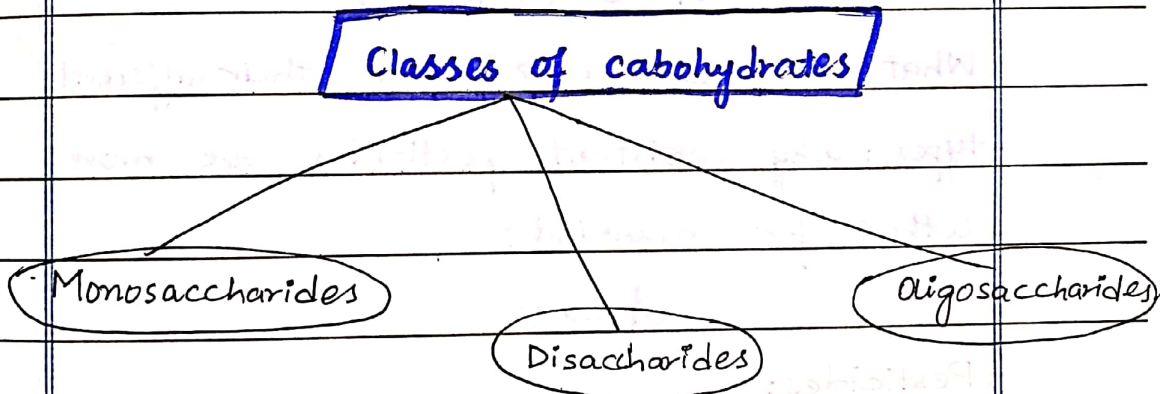


Causes of deficiency of carbohydrates:

There are may be so many serious health issues if one doesn't consume carbohydrates.

When there is absence of glucose which is responsible for carrying out different functions, the human

body uses protein for energy. Moreover, lack of carbohydrates' consumption in the diet can cause digestive problems. It may be disturb the energy, heart and brain functioning. It may cause to weight gain, Diabetes, Obesity. According to a survey report, Pakistan is the top 3<sup>rd</sup> country which is suffering diabetes.



1) Monosaccharides :-

Monosaccharides are also known as simple sugars. The sugar that can't be split into simpler sugars. Most common examples are glucose and fructose. Furthermore, Trioses, Hexoses, Heptoses, Tetroses etc.



**Disaccharides:**

Two monosaccharides combine and form a disaccharide. Examples of disaccharides are sucrose, lactose and maltose etc.

**Oligosaccharides:**

Carbohydrates formed by the condensation of 2-9 monosaccharides are known as oligosaccharides.

**Q #3 (Part a)**

What are pesticides? Explain their different types; why persistent pesticides are more lethal for mankind?

**Answer**

**Pesticides:**

Pesticides are the chemical substances that are meant to kill pests. Generally, pesticide is a chemical or a biological agent that kills pests.

There are many different types of pesticides and each is meant to

meant to be effective against specific pest/germ. They are used to kill fungi, plants or animals, that can cause damage to crops or hazardous to humans and animals' lives.

### Types of pesticides:

- i) Insecticides
- ii) Herbicides
- iii) Rodenticides
- iv) Bactericides
- v) Fungicides
- vi) Larvicides

**Insecticides:** Insecticides are used to kill or control insects. They are usually used in agriculture, industry, businesses and households.

### Herbicides:

Herbicides kill or control insects. They are used in agriculture, industry, businesses, and households.

### Fungicides:

Fungicides control fungi and

can be used on plants or other surfaces where mold grow. They may also have a role in protecting crop.

#### Rodenticide:

Substance that is used to kill rats, mice and other pests. Red squill are commonly used rodenticides.

#### Bactericide:

A substance that kills bacteria. Examples of bactericide are disinfectants, antiseptics and antibiotics.

#### Larvicides:

Type of insecticide which is used to control mosquitoes. They work by killing mosquito larvae and pupae before they grow into biting adults.

Persistent pesticides are more lethal for mankind:

The persistent pesticides are those that may take years



to be broken down. This is the main reason why persistent pesticides are more lethal for mankind.

These consist of organochlorine and stay for a longer period in the environment. Unlike other pesticides, they make the environment highly effective.

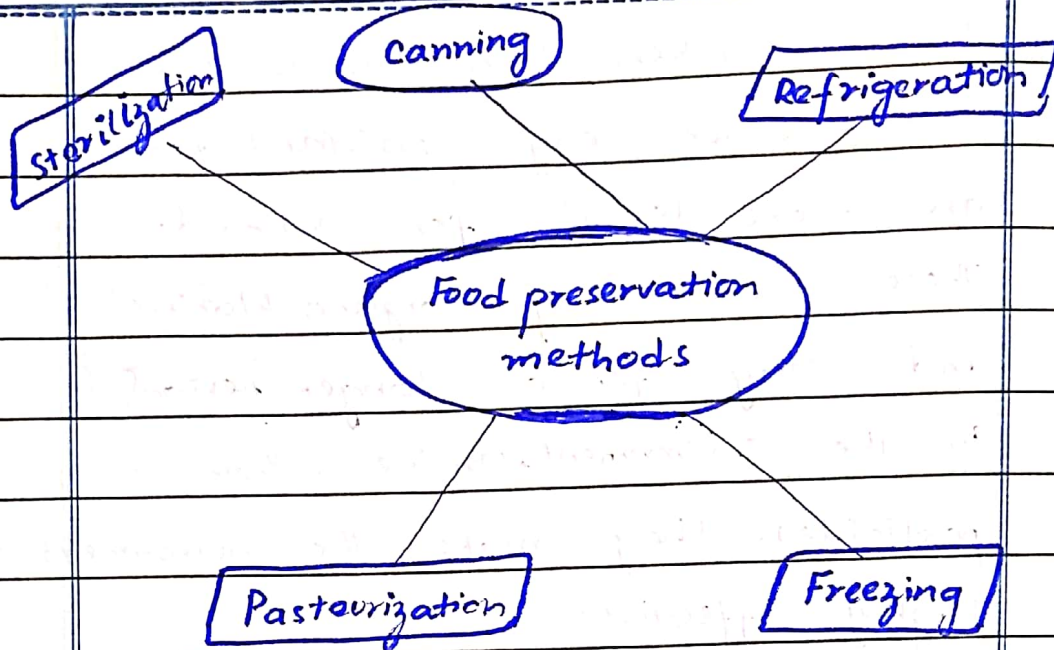
### Part (c)

Discuss different methods of food preservation:

#### Answer

The process of treating food in such a way to stop or greatly slow down spoilage and prevent foodborne illness while maintaining nutritional value, texture and flavour.

Food spoilage basically means any change that renders food unfit for human consumption.



**Refrigeration:-**

Keeping food at a temperature between  $0^{\circ}\text{C}$  and  $8^{\circ}\text{C}$ . This process is usually used for fresh food to slow down microbial growth.

**Freezing:**

Food preservation process based on exposing food to temperatures below its freezing point.

**Pasteurization:**

Method where a mild heat treatment is applied to a food to kill harmful bacteria.

**Canning:** The process of placing foods



in jars and heating properly to a specified temperature -

**Sterilization:**

The destruction or elimination of all organisms in a food by destroying vegetative bacteria, yeasts etc.

**Part (d)**

**Where and how fiber optics are used? Advantages and disadvantages.**

**Fiber Optics:**

The strands of glass which are used to transmit light signal from one point to another point is called

**Fiber optics:**

It is used in the process of telecommunication such as internet telephones and televisions etc.

**Advantages**

**Disadvantages**

- Low power loss
- Reliable
- Thinner and light weighted.

- Fragility.
- It is highly susceptible.
- Dispersion

Large bandwidth.

longer distances.

They transfer data signals in the form of light and travel hundreds of miles significantly faster than those in traditional electrical cables.

### Question # 5

#### Part (a)

What do you know about hepatitis? Describe its different types and write down its preventive measures.

#### Answer

Hepatitis is an inflammation of the liver that is caused by a variety of infectious viruses and agents leading to a range of health issues.

Hepatitis is commonly the result of a viral infection, but there are many other possibilities