

BAHRIA COLLEGE ZAFAR CAMPUS E-8
ISLAMABAD

CLASS: VII

SUBJECT: G. SCIENCE

SECOND TERM SYLLABUS

Unit no	Name of unit	Pg. no
19 Book 1	Food - Our Source of Energy	219
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TEACHER NAME: MISS IQRA AKRAM
KHAN

Date: 29. june.2020

Day: Monday

Topic: Food- Our Source Of Energy.

Answer the following questions:

Qno1: Define energy.

The capability of body to do work is known as energy.

Qno2: write the functions of Food.

Ans: functions of food:

Food provides us with

- energy to carry out the vital functions in our body.
- energy to do work.
- substances that our body needs for health and resisting diseases.
- the building materials needed for the growth of new cells and the repair of damaged cells.

Qno3: DO YOU KNOW.

1. **Name a few functions in our body that require energy**

Ans: Energy supports circulation, respiration, digestion, excretion and other functions performed by vital organs in our body.

2. **Name a few activities which involves a lot of energy.**

Ans: Activities which involve a lot of energy includes

1. Watching tv,
2. Washing clothes
3. Heating and lightening the home
4. Taking shower
5. Working your homework
6. Running appliances

3. **What type of vitamin should we take to avoid common cold?**

Ans: Vitamin c can reduce the duration of common cold.

4. **Name a few types of food which are necessary for the growth of young children.**

Ans: Milk, green vegetables, eggs meat, fruit, butter etc.

Qno4: The energy stored in every 100g of a beverage is 516kcal or 2159 kJ. How many kilocalories are there in one kilojoule?

Beverage = 516 kcal or 2159 kJ

How many kilocalories are there in kilo joule?

= 2159

516

= 41.8 K J

= So 1 kcal= 4kJ

Date: 30. June. 2020

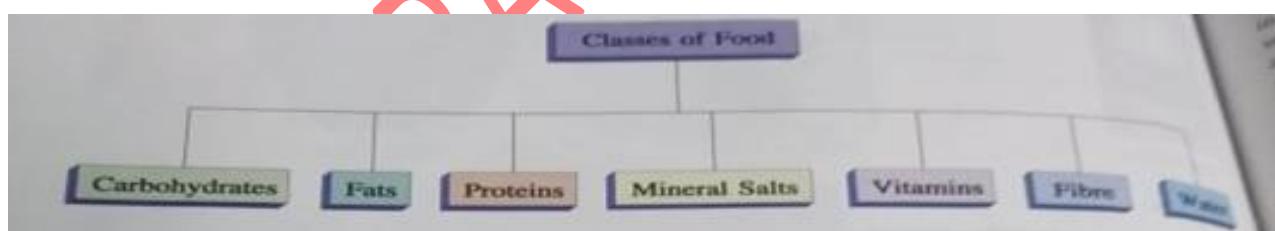
Day: Tuesday

Topic: The main classes of food

Pg.# 222

Qno5: what are the main classes of food?

Ans: Based on their different properties and job functions food is divided into seven main classes.



Qno6: Define nutrients.

Ans: nutrients:

Carbohydrates, fats, proteins, mineral salts and vitamins are also called nutrients because they contain useful substances required by our body.

Qno7: what are characteristics of Carbohydrates.

Ans: characteristics of Carbohydrates:

1. Carbohydrates are sugar and starches found in food.
2. They are compound made up of elements carbon, hydrogen and oxygen.
3. Carbohydrates supply most of our body's energy.
4. Sugar are the simplest kinds of carbohydrates.
5. Example of sugars include glucose, lactose, sucrose and maltose.

Qno8: Give example of food found in starch and sugar?

Ans: starch:

starches are found in food such as rice bread, breakfast cereals, potatoes, beans and pasta.

Sugar:

Sugars are found in sweet, fruits, chocolates, candy, jam, cakes and soft drinks.

Qno9: Why it is advice to don't take excess soft drinks?

Ans: (start from first line food or)

fruits, chocolates, candy, jam, cakes and soft drinks. Food or drinks made from refined sugar such as candy and soft drinks provide us with high calories but low nutrients. Hence it is not advisable to take in too much of them. Excess carbohydrates in our body are stored as fats and they are drawn upon to provide the body with energy when the carbohydrate intake is low.

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MS

Date: 01. July. 2020

Day: Wednesday

Topic: Fats pg. 223

Qno10: write characteristics of fats.

Fats

Fats, like carbohydrates, are compounds containing carbon, hydrogen and oxygen. However, they are insoluble in water. Fats from animals can be found in butter, lard, meat, cheese, milk, sausages and beefburgers. Fats from plants can be found in margarine, nuts and cooking oils such as peanut oil and sunflower oil. Fats produce more than twice as much energy as the same amount of carbohydrates. Fats also help to keep us warm.

Qno11: Write one advantage and disadvantage of fat.

Ans: Advantage:

Fats also helps to keep us warm.

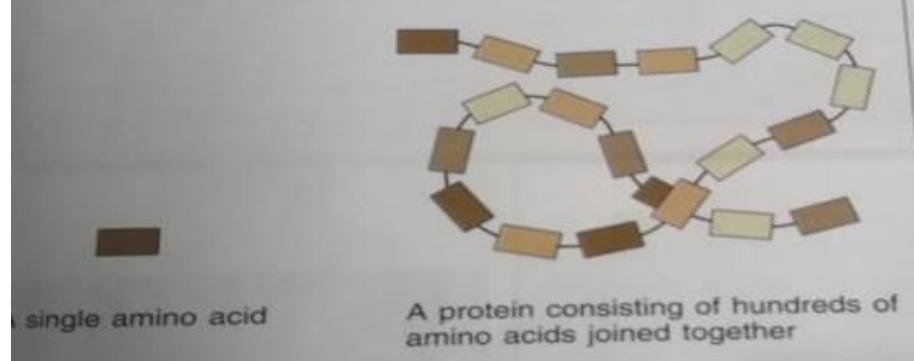
Disadvantage:

Too much fats in our body can lead to health problem like heart diseases.

Qno12: Define protein.

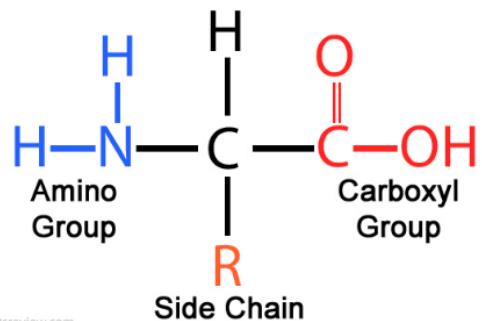
Ans: proteins:

Proteins consist of long chains of amino acids which are made up of the elements carbon, hydrogen, oxygen and nitrogen. There are about 20 different amino acids, but they combine in different orders in long chains to form thousands of different types of proteins.



Qno13: Draw structure of aminoacids.

Amino Acid Structure



Qno14: write functions of proteins.

The main function of proteins is to build body tissues, enzymes and hormones. It is essential for growth and repair of worn-out parts of our body. Muscles, cartilage and tendons in our body are made up of proteins. Proteins also supply us with some energy. Deficiency in proteins results in a disease called **kwashiorkor**, which is characterised by loss of body fat and wasting of muscle.

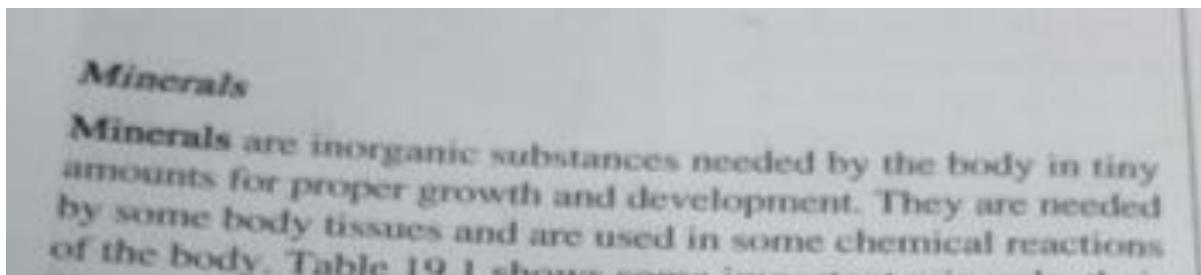
MISS IQRA

Date: 02. July. 2020

Day: Thursday

Topic: minerals and vitamins pg.# 224

Qno15: Define minerals.



Qno16: Write the functions and food sources of different minerals.

Minerals	Functions	Food sources
Calcium	<ul style="list-style-type: none">For making strong bones and teethFor clotting of bloodFor contracting muscles	Milk, milk products, green vegetables, eggs
Iron	<ul style="list-style-type: none">For making haemoglobin, the red pigment in red blood cells	Liver, meat, eggs, green vegetables
Iodine	<ul style="list-style-type: none">For making hormones of the thyroid gland. Deficiency leads to goitre, a swelling of the thyroid gland in the lower neck	Seafood, green vegetables
Sodium	<ul style="list-style-type: none">For regulating our body fluids. Too much sodium leads to high blood pressure	Common salt (sodium chloride), most natural and cooked foods

Qno17: How vitamins can be divided?

Ans: Classification of vitamin:

Vitamin can be divided into two groups:

1. water soluble vitamin
2. fat soluble vitamin

water soluble vitamin: water soluble vitamins such as vitamin B complex and vitamin C are readily removed from the body. Hence a regular intake is needed.

Fat soluble vitamin: fat soluble vitamins such as vitamins A,D,E and K are soluble in oil and stored in fat tissues where they are slowly released.

Qno18: Write functions, deficiency problems and food sources of different vitamins.

Vitamins	Functions	Deficiency problems	Food sources
A	<ul style="list-style-type: none"> For keeping skin and other body linings strong For normal vision 	<ul style="list-style-type: none"> Dry and scaly skin Night blindness 	Carrots, green vegetables, milk, eggs, fish, butter, pumpkins
B ₁	<ul style="list-style-type: none"> For changing carbohydrates into energy For proper functioning of the heart and nervous system 	<ul style="list-style-type: none"> Beri-beri, a disease affecting the nerves and muscles 	Yeast, meat, peas, whole-grain cereals, potatoes
C	<ul style="list-style-type: none"> For healthy teeth and gums For absorption of iron by bones For healing of wounds and preventing infections 	<ul style="list-style-type: none"> Scurvy (bleeding of gums), low resistance to infections and easily bruised 	Citrus fruits (e.g. oranges), tomatoes, papayas, guavas, green vegetables
D	<ul style="list-style-type: none"> For growth and development of bones and teeth 	<ul style="list-style-type: none"> Rickets (stunted growth), softening of bones and teeth 	Milk, milk products, eggs, liver, (our body produces its own vitamin D when sunlight falls on our skin)
E	<ul style="list-style-type: none"> For protecting cells against chemical injury 	<ul style="list-style-type: none"> Dry hair, heart diseases, muscular disorder 	Egg yolk, nuts, vegetable oil, wheat germ
K	<ul style="list-style-type: none"> For clotting of blood 	<ul style="list-style-type: none"> Bruises easily, prolonged bleeding 	Green vegetables, liver, egg yolk, (vitamin K is also made in the gut)

Date: 06. july.2020

Day: Monday

Topic: fibre pg#226

Qno1: Define fibre

Ans: fibre

1. **Fiber** is a type of carbohydrate that the body can't digest.
2. Though most carbohydrates are broken down into sugar molecules, **fiber** cannot be broken down into sugar molecules, and instead it passes through the body undigested.
3. **Fiber** helps regulate the body's use of sugars, helping to keep hunger and blood sugar in check.
4. Without fibre we may constipate and eventually damage our intestine, appendicitis and even cancer.

Qno2: write characteristics of water?

Ans: characteristics of water:

1. **Water** is an inorganic, transparent, tasteless, odorless, and nearly colorless chemical substance.
2. It is the main constituent of Earth's hydrosphere and the fluids of all known living organisms.
3. Water makes about 70% of our body weight.
4. all **food** has some water in it. Natural, whole **foods** have the highest **water** content. Fruit and vegetables contain 80 to 98 percent **water**.
5. our cells get the needed moisture from the water that we drink.
6. Digestion of solid foods also result in the release of water in our bodies.
7. The body needs water to regulate its temperatures.

Qno3: Define energy value.

Ans: the amount of heat released from the burning of a fixed mass of food is equal to the amount of energy in the food. This is known as its energy value.

Qno4: Define diet.

Ans: Diet is the food we eat and drink. A varied diet consists of different types of food from the various classes. Such as milk and milk products, Bread and cereals, Meat, Fruits and Vegetables.

Qno5: what is balanced diet?

A balanced diet contains the right amount of energy to meet an individual's needs. It must also have the right amount of the seven different classes of food to meet the other non-energy requirements of our body for growth and health. If the

Date: 07. july.2020

Day: Tuesday

Topic: REVIEW QUESTION – ANSWER

Pg. 230

Qno1: where do living things get their energy supply?

Ans: food is the source of energy for living things. Most energy comes from the sun, either directly or indirectly: Most life forms on earth get their energy from the sun. Plants use photosynthesis to capture sunlight, and herbivores eat those plants to obtain energy. Carnivores eat the herbivores, and decomposers digest plant and animal matter.

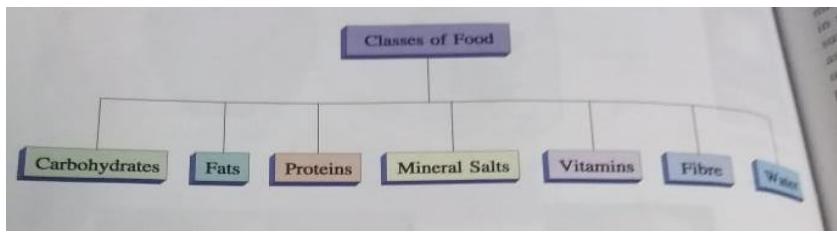
Qno2: what does food provide with us?

Food provides us with

- energy to carry out the vital functions in our body.
- energy to do work.
- substances that our body needs for health and resisting diseases.
- the building materials needed for the growth of new cells and the repair of damaged cells.

Qn03: what are the main classes of food?

Ans: food is divided into seven main classes.



Qno3b: Give three example of food in each of these classes.

Ans:

Classes	Food
Carbohydrates	Milk, rice, bread, breakfast , potatoes , beans and pasta.
Fats	Butter, cheese , milk , sausages
Protein	Meat, egg, fish , peanut, chicken, nuts.
Mineral salts	Green vegetables, milk , eggs.
Vitamin	Carrot, milk, egg, fish , butter, pumpkins, meat, potatoes.
Fiber	Brown bread, brown rice, leafy and crunchy vegetables, fruit , pasta, beans.
Water	Fruits are rich in water.

Qno3c: what is dietary importance of each class of food?

Ans:

Classes	Dietary importance
Carbohydrates	Carbohydrates are energy supplier. They supply our body with different amounts of energy.

Fats	Fats supply us with energy and help to keep the body warm.
Protein	Proteins supply energy and provide materials for building and repairing cells.
Mineral salts	Minerals are needed by body tissues and are used in some chemical reactions.
Vitamin	Vitamins are needed in small amount for speeding up some chemical reactions and for preventing deficiency diseases.
Fiber	Fiber is needed for keeping the intestines healthy and preventing constipation.
Water	Water is needed for breaking down food , dissolving nutrients, transporting nutrients and waste materials and carrying out chemical reactions.

4. Which of the following is **not** an energy-giving food?
- A. carbohydrates
 - B. proteins
 - C. fats
 - D. water
5. Energy in food may be measured in the following units except
- A. kilojoule.
 - B. calorie.
 - C. watt.
 - D. kilocalorie.

Qno6: why do we need balance diet?

A balanced diet provides the right amounts of energy and other substances to meet all the requirements of an individual's body for growth and development and to stay healthy.

THE END

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