Dr. M.K.K. ARYA MODEL SCHOOL, PANIPAT

CLASS-VII (2022-23)

HOLIDAY'S HOMEWORK

SUBJECT-SCIENCE

Case study questions

(A) Photosynthesis is an autotrophic mode of nutrition by plants and some bacteria. Photosynthesis is the physio-chemical process by which plants can convert light energy into chemical energy, in the form of carbohydrate from simple inorganic substances like atmospheric carbon dioxide and water. Photosynthesis requires carbon dioxide, sunlight, water and chlorophyll as its basic raw materials. Leave are considered to be the sites of photosynthesis. Hence, they are called as food factories of the plant. Leaves possess small pores called stomata on both their surfaces. Stomata are the structures which help in the exchange of gases. Opening and closing of the stomata are brought about by the guard cells present in them. Leaves are rich in plastids. Green colored plastids are chloroplasts rich in chlorophyll pigment. Chlorophyll is responsible for trapping the energy from sunlight.

Answer the following.

1.Explain the process of synthesis of food in plants.

2.What is stomata? Write its function?

3.Who is responsible for trapping of sunlight?

(B) Amoeba is a microscopic single celled organism, which is found in pond water. It is very simple animal and cannot be seen by naked eyes. Amoeba has a cell membrane, a rounded dense nucleus and many small bubble-like vacuoles in its cytoplasm. These vacuoles are of two types, i.e. food vacuole and contractile vacuole. Food vacuole contains food surrounded by water while contractile vacuole contains liquid or water and controls water regulation activity in Amoeba. Its shape is not fixed, i.e. it constantly changes its shape and position. The body of Amoeba has finger-like projections, called pseudopodia or false feet. It captures food and helps in locomotion of Amoeba

Answer the following.
1.Explain pseudopodia along its function.
2.Why we call amoeba a microscopic animal?
3.What are the functions of vacuoles present in amoeba?

(C) Read the paragraph given below and answer the questions that follow:

Clothes are made of different materials. We get these materials from both plants and animals. Ab 30,000 years ago, people started using animal skins for clothing. It is believed that wool was used as early as 6000 years ago, Flax is grown for its seeds, which can be ground into a meal or turned ints linseed oil, a product used as a nutritional supplement and as an ingredient in many wood-finishing products. Flax is also grown as an ornamental plant in gardens. Moreover, flax fibers are used to make linen. Domestication of silkworms to produce silk occurred around 3000 BC in China. In India, cotton came into widespread use around 3000 BC. These fabrics were not stitched. They were just wrapped around the body. Even today, sari, dhoti, and turban are unstitched pieces of cloth.

1.Write the uses of flax.

2. Give four examples of Natural and synthetic fibre each.

Clinical thermometer is a device that is used to measure the body temperature of a person. It is made up of a glass tube of uniform thickness. The glass tube contains a bulb at one end which is filled with Mercury. The Mercury level in the thermometer rises up like a thread which indicates the temperature of the body. The level of the Mercury can be measured by reading the scale given on the thermometer. The scale of the thermometer records the temperature in degree Celsius, generally, 35 C to 45 C, which is the range of human body temperature. On an average, the temperature of the human body is around 37C. The clinical thermometer has a small sharp curve (kink) present near the bulb. This prevents the Mercury level from falling down on its own in the thermometer.

1.What is the use of kink in thermometer?

2.What is clinical thermometer?

3. What is the range of temperature reading of a clinical thermometer?

Activity-

Silk fibre that is obtained without killing silkworms is called 'Ahimsa silk'. Find where this term is originated and advantages and disadvantages of obtaining silk in this manner. Collect information on the method of producing 'Ahimsa Silk' and the places where it is practised.