

Science

CHAPTER 1 - NUTRITION IN PLANTS

Very short answer type questions

1. The phenomenon of providing nutrients that are present in the food providing nutrition to the body is called nutrition.
2. The chemical substances present in the food that provide energy to the body are called nutrients.
3. Carbon dioxide + Water in the presence of Sunlight and chlorophyll Starch + Oxygen



4. Carbon, hydrogen, oxygen and phosphorous.
5. (a) Parasites (b) Saprophytes (c) Symbionts (d) Insectivorous
6. Photosynthesis in plants takes place in chloroplasts.
7. Oxygen and starch (glucose) are the major by-products of photosynthesis.

Short answer type questions

1. The absorption and utilization of minerals by plants is called mineral nutrition.
2. The essential factors for photosynthesis are carbon dioxide, water, chlorophyll and sunlight.
3. Autotrophs are those organisms that can prepare their own food. Plants can prepare their own food through the process of photosynthesis, therefore, are autotrophs.
4. Parasites are the living organisms which obtain food from other plants and animals on or in which they live. Some common examples of plant parasites are Rafflesia, Cuscuta, Mistletoe, Viscum, etc.
5. Heterotrophs are those that obtain their food from other plants, animals, and also from dead and decaying organisms. On the basis of the source of food, heterotrophic plants can be categorized into Parasites, Saprophytes, Symbionts and Insectivorous.
6. Trace elements, also known as the microelements are the minerals like boron, copper, manganese, molybdenum, zinc that are required in small amount by the plants for their survival.
7. Saprophytes are organisms that feed on dead organic matter. These organisms derive their food from these dead plants or animals. Mushroom, Monotropa and some types of bacteria are examples of saprophytes.

Differentiate the following

1. Organisms that can prepare their own food are called autotrophs. Nutrition exhibited by such organisms is called autotrophic nutrition.
Organisms that are not able to prepare their own food are called heterotrophs. Nutrition exhibited by such organisms is called heterotrophic nutrition.
2. Parasites are the living organisms which obtain food from other plants and animals on or in which they live. Rafflesia, Cuscuta, Mistletoe, Viscum are the examples of parasites.
Two organisms that live in close physical association for their mutual benefit are called symbionts. Example of symbiosis is the association of a bacterium, Rhizobium and leguminous plants or pulses.
3. The elements like carbon, hydrogen, oxygen, phosphorous, sulphur that are required by the plants in large amount for their survival are called macronutrients.
Trace elements, also known as the microelements are the minerals like boron, copper, manganese, molybdenum, zinc that are required by the plants in small quantity for their survival.

CHAPTER 3- ANIMAL FIBRES**Very short answer type questions**

1. Silk is a fine, strong, soft, lustrous fibre that is used since time immemorial from the royalty of the past to commoners of the present for its elegance hence known as the “queen of fibres.”
2. Egg, worm, chrysalis (cocoon) and moth are the different stages of life cycle of a silk moth.
3. Wool can hold a lot of air and air being a bad conductor of heat makes the wool a good insulator of heat.
4. Wool is sorted out by separating piles of fleece of similar nature.
5. Rabbit, ark, llama are few more animals that contributes to the production of wool.
6. Sericin is the gummy fluid produced by silkworm which becomes hard when exposed to air and allows fibres to adhere to one another.
7. The Sorter's disease by the infection of the bacterium anthrase.

Short answer type questions

1. The uses of silk are:
 - a. Silk is used to make sarees, blouses, scarves, pants and ties.

- b. It can also be made into curtains, draperies, cushion covers and sofa covers.
 - c. It is also used in the medical field for sutures and prosthetic arteries.
2. The properties of wool are:
- a. Wool is hard wearing and absorbs moisture.
 - b. It is resistant to dirt, and wear and tear.
 - c. It is lightweight and versatile.
 - d. It does not wrinkle easily.
 - e. It does not burn over a flame but smoulders instead. It leaves a brittle black bead when burnt.
 - f. It insulates against heat and cold.
3. Fine wool is used in making athletics attire, because it absorbs the perspiration thereby allowing the body to “breathe”.
4. Workers work in cramped, damp and poorly ventilated units. This causes respiratory problems like asthma and bronchitis.
5. The properties of silk are
- a. It can be easily dyed.
 - b. It is the strongest natural fibre and is also lustrous.
6. The uses of silk are:
- a. Silk is used to make sarees, blouses, scarves, pants and ties.
 - b. It can also be made into curtains, draperies, cushion covers and sofa covers.
7. Rabbit, yak, llama, sheep are animals that produce wool.

CHAPTER 12 - TIME AND MOTION

Very short answer type questions

- 1. Disadvantages of sundial are it cannot be used to measure time at night or during cloudy days due to absence of sunlight.
- 2. When speed of a moving object does not changes with respect to time it is called uniform motion.
- 3. Odometer is a device to record the distance covered by an object.
- 4. Speed is the distance travelled in unit interval of time.
- 5. Distance-time graph can
Interpret whether an object is in uniform or non-uniform motion.
it can determine the distance travelled by the object for a given

interval of time.

used to compare the speeds of two or more moving objects.

Short answer type questions

1. Sundial consists of a horizontal circular board marked 1 to 12 in hours. A triangular metal plate known as gnomon is fixed vertically on the board. Since the earth turns on its axis, the sun appears to move from east to west across the sky, and shadows cast by it move in the clockwise direction. The shadows are at their shortest at noon, when the sun is vertically above the sky, and at their longest early in the morning or late in the evening, when the sun is near the horizon. The sundial works by casting a shadow in different positions at different times of the day. The time can be determined by looking at the shadow cast by the Sun as it shines on the gnomon of a sundial.
2. At points to the east of the date line the calendar is one day earlier than at points to the west of it. Therefore, a traveller going eastward across the date line from one island to another would not have to reset his watch because he would stay inside the time zone, but it would be the same time of the previous day.
3. distance = 3 km
time = 5 minutes
speed to be calculated in km /h
Conversion of minutes to hour = $5/60$
Calculation: $3 / (5/60) = 3 \times 60/5 = 36$ km/hour
Answer: 36 km/hour
4. The object is said to be at rest after having travelled to certain distance and hence shows a parallel line on a distance time graph.
5. An object is said to be in uniform motion when speed of it does not change with respect to time. It forms an inclined straight line when plotted on a distance–time graph.
