

# Assignment No. 1

## Chapter –1 Nutrition in Plants

### I. Fill in the blanks:

1. Green plants are \_\_\_\_\_ in nature.
2. \_\_\_\_\_ are the tiny pores present on leaf surface to breathe in air.
3. \_\_\_\_\_ gives a leaf the ability to convert solar energy into food.
4. Plants manufacture food in the form of \_\_\_\_\_.
5. \_\_\_\_\_ is a parasitic plant.
6. Green plants are called \_\_\_\_\_ because they make their own food.
7. Human beings are \_\_\_\_\_
8. Presence of starch is tested with the help of \_\_\_\_\_

### II. Name the following:-

1. A parasitic plant with long, yellow and slender stem. \_\_\_\_\_
2. The pores in leaves through which exchange of gases takes place. \_\_\_\_\_
3. The gas released during photosynthesis. \_\_\_\_\_
4. The process of taking food and its utilization by the body. \_\_\_\_\_
5. An organism which cannot make its own food and depends on other for its food. \_\_\_\_\_

### III. Match the following:-

#### Column A

1. Fungi
2. Amarbel
3. Pitcher Plant
4. Animal
5. Plant's food factory

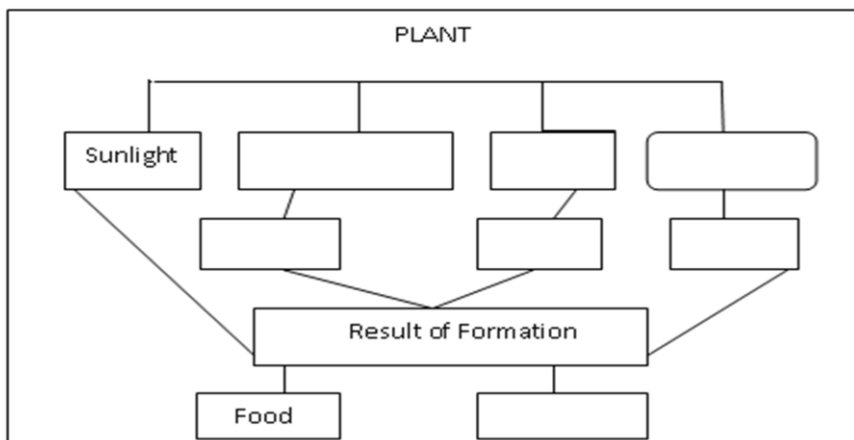
#### Column B

- (a) Leaf
- (b) Heterotrophs
- (c) Parasite
- (d) Saprophyte
- (e) Insects

### IV. State whether true or false

1. All plants are autotrophs
2. Animals are heterotrophs.
3. Insectivorous plants are also autotrophs.
4. The product of photosynthesis is carbohydrates.
5. Food is synthesized in chlorophyll pigment.

### V. Complete the following web chart



**VI. Multiple Choice Questions:-**

**1. Stomata is surrounded by:**

- (a) Guard cells (b) Chlorophyll (c) Carbohydrates (d) None of them

**2. Which of the following is a parasitic plant?**

- (a) Cuscuta (b) Algae (c) Pitcher plant (d) Lichen

**3. Which of the following requires nitrogen for its synthesis?**

- (a) Carbohydrates (b) Proteins (c) Fats (d) Vitamin

**4. Which of the following does not help in providing nitrogen to the soil?**

- (a) Peas (b) Gram (c) Beans (d) wheat

**5. Living organisms are made up of tiny units called**

- (a) Nucleus (b) Cell (c) Cytoplasm (d) Cell membrane

**6. Slimy green patches are formed in ponds by-**

- (a) Algae (b) Bacteria (c) Lichens (d) none of these

**7. Which of the following statements is false?**

- (a) Green plants are autotrophs (b) Non -Green plants and animals are heterotrophs  
(c) Photosynthesis takes place mostly in green leaves which contains green pigment, Chlorophyll.  
(d) Photosynthesis does not take place in deep red, violet or brown leaves.

**8. Which of the following parts of a desert plant perform the function of photosynthesis?**

- (a) Leaves (b) Stem (c) both (a) and (b) (d) None of these

**9. The green coloured pigment in the leaves is-**

- (a) Chlorophyll (b) Anthocyanin (c) Protoplast (d) Chloroplast

**10. Which of the following is not true about saprophytic plants?**

- (a) These plants are green in colour. (b) These plants are commonly seen during and after rain.  
(c) Yeast shows saprophytic mode of nutrition.  
(d) These plants secrete digestive juices on the dead and decaying matter

**11. Saprophytic mode of nutrition is found in**

- (a) Lichen (b) bladder wort (c) mushroom (d) cuscuta

**12. Two different organisms living together and both benefit each other are known as:-**

- (a) Saprophytic (b) Symbiotic (c) Parasitic (d) Heterotrophs

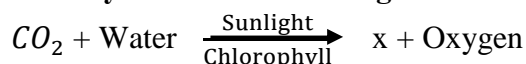
**13. Pitcher Plant is green in colour but it eats insects to complete the requirement of-**

- (a) Water (b) Carbon dioxide (c) Nitrogen (d) Oxygen

**14. Which of the following is the function of stomata?**

- (a) Carbon dioxide enters the leaf through stomata  
(b) Nitrogen discharges into the atmosphere from the leaf through stomata  
(c) Food material synthesized in the leaf is discharged into the atmosphere from the leaf through stomata.  
(d) Oxygen enters the leaf through stomata.

**15. Identify 'X' in the following reaction:**



- (a) Vitamin (b) Protein (c) Carbohydrate (d) Minerals

**16. Which of the following raw material is not necessary for photosynthesis?**

- (a)  $H_2O$  (b) Sunlight (c) Nitrogen (d) none of these

**17. Which of the following is not insectivorous**

- (a) Bladderwort (b) Pitcher Plant (c) Lichens (d) Sundew

**18. Photosynthesis is a**

- (a) Natural process (b) Chemical process (c) Natural Chemical Process (d) Physical process

- 19. Which of the following season provides ideal conditions for fungi to grow?**  
 (a) Cold weather (b) Rainy season (c) Hot and humid weather (d) Both (b) and (c)
- 20. Which of the following is correct?**  
 (a) Fungi like yeast and mushroom are useful (b) Some fungi cause disease in plants.  
 (c) Some fungi are also used in medicines (d) All the above.
- 21. Autotrophs have a green coloured pigment called \_\_\_\_\_**  
 (a) Leucoplast (b) Chlorophyll (c) Basophil (d) Haemoglobin
- 22. Raw material for photosynthesis**  
 (a) Carbon Dioxide (b) Chlorophyll (c) Sunlight (d) All of them
- 23. An example of an autotrophic plant is**  
 (a) Mushroom (b) Mould (c) Dodder (d) Neem
- 24. An example of a saprophyte plant is**  
 (a) Dodder (b) Cuscuta (c) Mushroom (d) All of them
- 25. Of the following identify the carnivorous plant**  
 (a) Pitcher Plant (b) Venus fly trap (c) None of them (d) Both of them
- VII. Very Short Question:-**
1. Define nutrition.
  2. Where are the food factories of plants located?
  3. How do fungi germinate and grow?
  4. How water and minerals absorbed by the roots reach the leaves?
  5. Some plants have deep red, violet or brown leaves still these leaves carry out photosynthesis. How?
  6. What are insectivorous plants? Give examples.
  7. Is it possible that insectivorous plants do not get all required nutrients from the soil in which they grow?
- VIII. Short Answer Question:-**
1. What are stomata? Draw its diagram.
  2. Write harmful and useful effects of Fungi.
  3. Define symbiotic relationship with example.
  4. How nutrients are replenished in the soil?
  5. What are algae? Why they are green in colour?
  6. Define autotrophs and heterotrophs.
  7. If the pitcher plant is green and carries out photosynthesis then why does it feed on insects?
- IX. Long Answer Question:-**
1. How do pitcher plants eat insects? Explain with diagram.
  2. How do plants obtain the raw materials from the surroundings?
  3. Define cell. Draw and explain general structure of cell.

## Assignment No. 2

### Chapter-5 Acid, Base and Salts

#### I Fill in the blanks

1. The bases turn \_\_\_\_\_ litmus to \_\_\_\_\_
2. The indicator that gives green colour with a base is \_\_\_\_\_
3. An effective antacid contains \_\_\_\_\_
4. A solution which does not change the colour of an indicator is called \_\_\_\_\_ solution.
5. The reaction between an acid and a base to form a salt and water is called \_\_\_\_\_ reaction.
6. \_\_\_\_\_ are used to test acidic and basic nature of solution.
7. When acid and base react \_\_\_\_\_ are formed.
8. \_\_\_\_\_ indicator is reddish – brown in basic medium.
9. The sour things we eat contain \_\_\_\_\_
10. Sodium Hydroxide is also called \_\_\_\_\_.

#### II State true or false

1. An acidic solution gives green colour with China rose indicator.
2. Aluminum Hydroxide is an alkali.
3. Battery acid is dilute sulphuric acid.
4. Antacids are acidic substances
5. Sulphuric acid is present in stomach
6. If the soil is too acidic, quick lime is added to it.

#### III Write one word for the following

1. Acids obtained from minerals. \_\_\_\_\_
2. The bases which dissolve in water. \_\_\_\_\_
3. A base used in white washing. \_\_\_\_\_
4. A substance that changes in colour when added to an acid or base. \_\_\_\_\_
5. A natural indicator which is pink in neutral solution and changes to green in basic solution.  
\_\_\_\_\_

#### IV Match the following

##### Column A

1. Hydrochloric Acid
2. Ascorbic acid
3. Sulphuric acid
4. Lactic acid
5. Acetic acid

##### Column B

- (a) in Storage Batteries
- (b) Found in Yoghurt
- (c) in making Vinegar
- (d) as bathroom acid
- (e) Vitamin C

#### V Multiple Choice Questions

1. Solutions which do not change the colour of litmus are \_\_\_\_\_  
(a) Acidic                      (b) Basic                      (c) Neutral                      (d) Both a and c
2. When an acid and a base react with each other the reaction mixture becomes  
(a) Hot                      (b) Cold                      (c) Acidic                      (d) Basic

- 3 **Acid present in the sting of an ant is \_\_\_\_\_**  
 (a) Acetic acid      (b) Formic acid      (c) Lactic acid      (d) Ascorbic acid
- 4 **The acid present in our stomach which helps in digestion of food is \_\_\_\_\_**  
 (a) Sulphuric acid    (b) Nitric acid      (c) Hydrochloric acid    (d) Phosphoric acid
- 5 **Acids turn methyl orange solution \_\_\_\_\_**  
 (a) Blue      (b) Pink      (c) Red      (d) Colourless
- 6 **\_\_\_\_\_ is known as ascorbic acid which is present in citrus fruits.**  
 (a) Vitamin D      (b) Vitamin C      (c) Vitamin B      (d) Vitamin K
- 7 **A base which dissolves in water is called**  
 (a) Soluble Base    (b) Alkali      (c) Acid      (d) Oxide
- 8 **Acids reacts with metals to liberate \_\_\_\_\_ gas**  
 (a) Oxygen      (b) Carbon- Dioxide    (c) Hydrogen      (d) Nitrogen
- 9 **China rose indicator turns acidic solution to ..... And the basic solution to .....**  
 (a) Dark pink, blue      (b) Red, Yellow    (c) Dark Pink, Green    (d) Red, green
- 10 **Natural indicator litmus is extracted from**  
 (a) Lichen      (b) Earthworm      (c) Ants      (d) Algae
- 11 **The industrial waste is \_\_\_\_\_ in nature**  
 (a) Acidic      (b) Basic      (c) Neutral      (d) Both a & c
- 12 **Atul was given a colourless solution in a test tube. He put a drop of this solution on blue litmus paper. It remained blue in colour. The colourless solution is:-.**  
 (a) Acidic in nature    (b) Basic in nature    (c) Neutral in nature    (d) both (b) and (c)
- 13 **China rose indicator when added to sodium hydroxide solution turns**  
 (a) Magenta      (b) Colourless      (c) Green      (d) Pink
- 14 **China rose indicator is prepared from \_\_\_\_\_**  
 (a) Leaves of the flower    (b) Stem of flower    (c) Petals of flower    (d) Sepals of flower
- 15 **The word acids means.**  
 (a) Bitter      (b) Sour      (c) Sweet      (d) All of the above
- 16 **Acid rain is caused due to .....**  
 (a)  $\text{CO}_2$ ,  $\text{O}_2$ ,  $\text{SO}_2$     (b)  $\text{CO}_2$ ,  $\text{NO}_2$ ,  $\text{H}_2$     (c)  $\text{SO}_2$ ,  $\text{N}_2$ ,  $\text{O}_2$     (d)  $\text{CO}_2$ ,  $\text{SO}_2$ ,  $\text{NO}_2$
17. **Milk of magnesia used to treat acidity in stomach, contains this base.**  
 (a) Magnesium hydroxide.      (b) Ammonium hydroxide  
 (c) Sodium hydroxide      (d) Copper hydroxide
18. **The substances used to test the acidity and basicity of substances are called –**  
 (a) Indicators      (b) Testers      (c) Analyzers      (d) All of them

19. **The acid used for preserving food articles is –**  
(a) Acetic Acid      (b) Tartaric Acid      (c) Sulphuric Acid      (d) Nitric Acid
20. **Which of the following is a strong base?**  
(a) Ammonium hydroxide ( $\text{NH}_4\text{OH}$ )      (b) Sodium hydroxide ( $\text{NaOH}$ )  
(c) Water ( $\text{H}_2\text{O}$ )      (d) Sulphuric Acid ( $\text{H}_2\text{SO}_4$ )
21. **When a drop of phenolphthalein is introduced in lime water, the solution turns –**  
(a) Blue      (b) Red      (c) Milky      (d) Pink
22. **Acids are ..... in taste while bases are ..... in taste.**  
(a) Sweet, salty      (b) Sweet, sour      (c) Sour, salty      (d) Sour, bitter

## **VI Very Short Answer Questions**

1. What is milk of magnesia.
2. Define Base. Give examples
3. Define acids. Give examples.
4. How can you test the presence of an acid and base in a solution?
5. Define dilution.
6. Name two plants from which indicators can be prepared.
7. Give chemical composition of  
(a) milk of magnesia      (b) calamine solution

## **VII Short Answer Questions**

1. Define indicators. Give examples.
2. Write important properties of acids.
3. Write important properties of bases.
4. What is acid rain? What causes acid rain and how it is harmful?
5. Name the acid present in following  
(a) Vinegar      (b) Ant's sting      (c) Citrus fruits      (d) Curd  
(e) Spinach      (f) Amla      (g) Tamarind, Unripe Mangoes
6. Name the base present in following  
(a) Lime water      (b) Window cleaner      (c) Soap      (d) Milk of Magnesia

# Assignment No.3

## Chapter – 9 Soil

### I. Fill in the blanks:-

1. The Process of formation of soil is called \_\_\_\_\_
2. \_\_\_\_\_ and \_\_\_\_\_ help in weathering.
3. The three main layers seen in a soil profile are \_\_\_\_\_, \_\_\_\_\_ and \_\_\_\_\_
4. Humus is present in \_\_\_\_\_ horizon.
5. The \_\_\_\_\_ soil has the highest water - holding capacity.
6. Cutting down of trees on large scale is called \_\_\_\_\_.
7. Percolation rate of water is high in \_\_\_\_\_ soil.
8. The layers of soil are called \_\_\_\_\_
9. The removal of the topsoil by strong wind or by flowing water is called \_\_\_\_\_
10. The dark colour of the top soil is due to the presence of \_\_\_\_\_

### II True or False-

1. Sub-soil is also called C-Horizon.
2. Sandy soil retains more water than other types of soil.
3. Based on particle size, clay has the smallest particles.
4. Loamy soil has the right water - holding capacity.
5. The C-horizon is the layer of soil which is rich in humus.
6. Cutting down of trees on large scale is called deforestation.
7. Soil also contains some insects and micro-organisms.
8. Soil erosion is the removal of top soil by wind or flowing water.
9. The percolation of water through soil is the same as absorption of water by the soil.
10. Humus is important because it makes the soil fertile.

### III. Multiple Choice Questions-

1. **The darkest layer of soil is**  
(a) Top soil (b) bed-rock (c) C-horizon (d) sub-soil
2. **Which of the following can hold maximum amount of water?**  
(a) Gravel (b) Sand (c) Clay (d) Silt
3. **Weathering of rocks occurs due to**  
(a) strong winds (b) flowing water (c) Heating & cooling of rocks (d) all of these
4. **In which of the following humus is present in reasonable amount?**  
(a) A-horizon (b) B-horizon (c) C-horizon (d) Bed-rock
5. **Which of the following contains the smallest rock particles?**  
(a) Silt (b) Clay (c) Sand (d) All contain equal sized particles.
6. **The layer of soil which is soft, porous & can hold more water is**  
(a) Top soil (b) Sub-soil (c) C-horizon (d) bed-rock
7. **The layer of soil from which plants get the essential nutrients is**  
(a) top soil (b) sub soil (c) C-horizon (d) bed-rock
8. **Soil profile consists mainly of**  
(a) Two layers (b) three layers (c) Four layers (d) five layers
9. **Which of the following is best suited for growing plants?**  
(a) Sandy Soil (b) clayey soil (c) Loamy soil (d) all of these
10. **The mixture of rock particles and \_\_\_\_\_ is called soil.**  
(a) Humus (b) Clay (c) Minerals (d) Water
11. **On a hot summer day air above the soil seems to shimmer because**  
(a) Shiny surface of soil reflects the sunlight (b) air becomes mirror like  
(c) Water vapours coming out of the soil reflect the sunlight. (d) All the above.
12. **The \_\_\_\_\_ makes the soil fertile for growing plants.**  
(a) Water (b) clay (c) Humus (d) Sand

13. **The natural resource which supports the growth of plants by supplying water and nutrients to plants is:-**  
 (a) soil (b) Coal (c) Oil (d) water
14. **Removal of land surface by water, ice or wind is known as-**  
 (a) Weathering (b) Deforestation (c) Erosion (d) Evaporation
15. **Soil erosion can be prevented by -**  
 (a) Planting more trees (b) Cutting down trees (c) Deforestation (d) None of these
16. **\_\_\_\_\_ soil is heavy as it hold water and has little air:-**  
 (a) Loamy (b) Clay (c) Sandy (d) Silt
17. **The soil which occurs as deposits in river beds is -**  
 (a) Loamy (b) Sandy (c) Silt (d) Clay
18. **The soil rich in clay and organic matter is best suited for which kind of crop?**  
 (a) Pulses (b) Paddy (c) Cotton (d) Wheat
19. **On heating a soil sample in boiling tube, what will you observe?**  
 (a) It starts boiling (b) No change in the sample (c) Soil particles start vaporizing.  
 (d) Water vapours condense on the cooler inner walls of upper part of boiling tube.
20. **The process of soil formation by breaking down of rocks by the action of wind, water and climate is called-**  
 (a) Weathering (b) Erosion (c) Filtration (d) Evaporation
21. **Soil is composed of distinct layers; the topmost layer consists of rotting dead matter called**  
 (a) clay (b) Humus (c) Sand (d) Gravel
22. **Many living organisms such as worms, rodents, moles & beetles and roots of small plants are found in**  
 (a) B-horizon (b) Topsoil (c) Bedrock (d) C-horizon
23. **The remain of plants and an animal in the soil is called:**  
 (a) Humus (b) silt (c) clay (d) none of these
24. **Unit of rate of percolation of water in soil is:-**  
 (a) (ml/sec) (b) (ml/min) (c) (g/min) (d) (g/sec)
25. **A vertical section through different layers of soil is called:**  
 (a) Soil Profile (b) Horizons (c) Bed rock (d) Soil layers.
26. **Lentils and other pulses grow well in \_\_\_\_\_ soils, which drain water easily.**  
 (a) Loamy (b) Clayey (c) Sandy (d) None of the above
27. **Soil sample takes 15 minutes to percolate 300ml of water. Its rate of percolation will be**  
 (a) 10ml/min (b) 15ml/min (c) 25ml/min (d) 20ml/min
28. **A bedrock is present below**  
 (a) A-horizon (b) B-horizon (c) c-horizon (d) none of these

**IV. Match the following:**

**Column A**

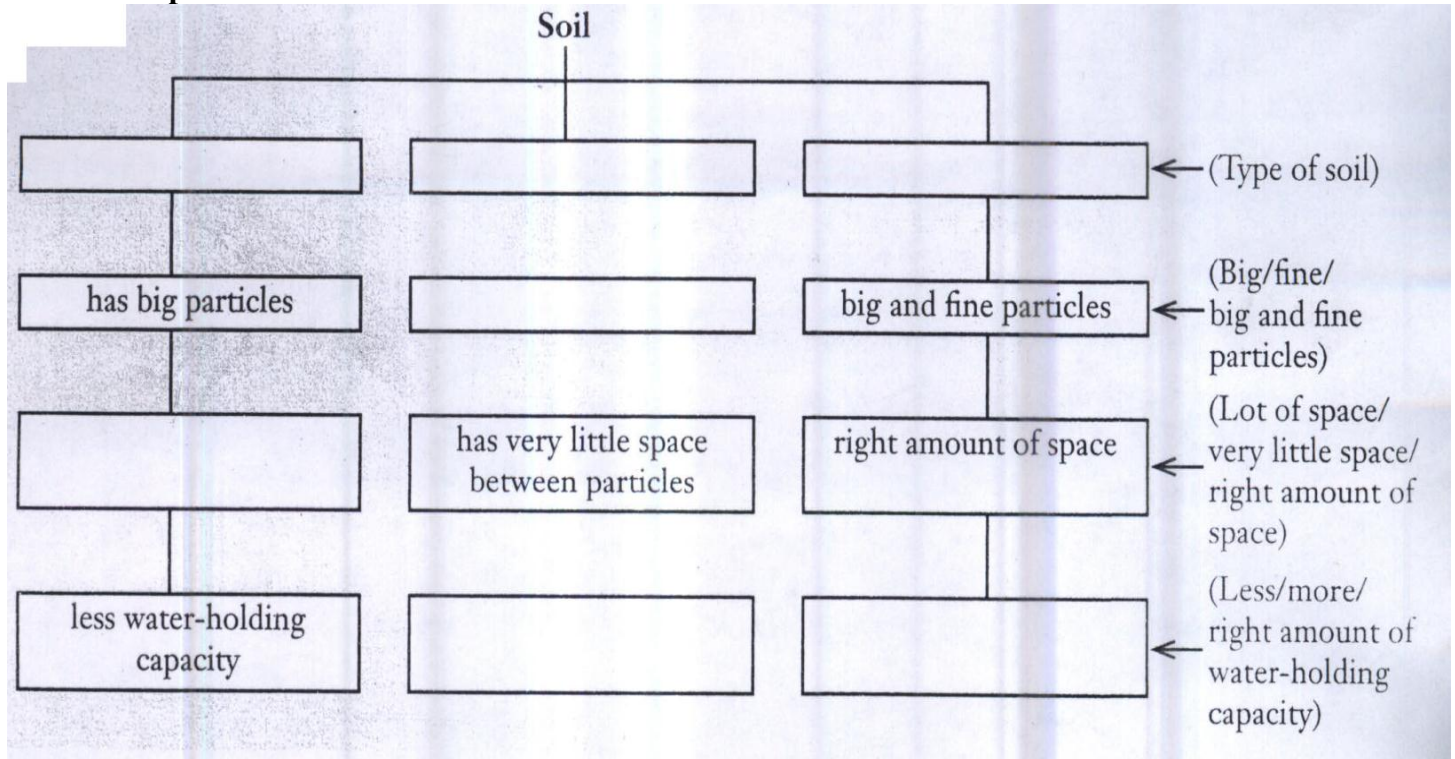
1. Mixture of rock particles & humus
2. Soil
3. Hard Layer of soil
4. Deposit in river
5. Gram
6. Cotton
7. Lentil
8. Paddy

**Column B**

- (a) Bed-Rock
- (b) Silt
- (c) Soil
- (d) Natural resources
- (e) Loamy Soil
- (f) Clayey & Loamy Soil
- (g) Clayey soil rich in organic matter
- (h) Sandy-Loam



**V Complete the web chart.**



**VI Very Short Answers**

1. Give reason why during a hot summer day the air above land seems to shimmer.
2. Name some important climatic factors which affect the soil profile.
3. What factors determine the various types of vegetation and crop that might grow in any region?
4. What kind of soil would be the most suitable for planting rice? - (Soil with higher or lower rate of percolation)

**VII. Short Answer Question:-**

1. Why there is a ban on polythene bags and plastics?
2. Define weathering, humus and soil.
3. How soil can be classified? Explain.
4. Which type of soil would be best for making pots, toys and statues? Why?
5. What is the composition of loamy soil?
6. Which is the best top soil for growing plants and why?
7. What is meant by soil erosion? What are the causes of soil erosion?
8. Why there is a difference in the percolation of water in kutcha floor and pucca floor?
9. Why is the horse dung mixed in soil while preparing matkas & surahis?

**VIII Long Answer Question**

1. Define soil profile. Explain different layers of soil with labelled diagram.
2. Which type of soil is suitable for growing-  
(i) Cereals (ii) Paddy (iii) Lentils and other pulses (iv) Cotton & why?
3. What is the difference between the rate of percolation and the amount of water retained?
4. What is meant by soil moisture? Show by an activity that moisture is present in the soil.
5. How can we calculate percentage of water absorbed by soil?

## Assignment No.4

### Chapter – 3 Fibre to Fabric

#### A. Fill in the blanks

1. The protein secreted by silkworm is \_\_\_\_\_
2. \_\_\_\_\_ and \_\_\_\_\_ can cause infection in sheep after shearing.
3. The \_\_\_\_\_ of the sheep along with its thin layer of skin removed from its body. This process is called \_\_\_\_\_.
4. The rearing of silkworms for obtaining silk is called \_\_\_\_\_.
5. \_\_\_\_\_ silk is the main variety of silk produced in India.

#### B. Write True or False

1. The silkworm is a caterpillar.
2. Wool traps more air in it as compared to cotton.
3. During scouring, the sheared hair are washed with soap solution.
4. Natural fleece of sheep and goats is only black.
5. The thread obtained in the reeling process is called cotton.

#### C. Write one word for the following:-

1. Rearing of silk moth \_\_\_\_\_
2. The process by which curly wool fibres are straightened. \_\_\_\_\_
3. The sticky fluid which on exposure to air forms a thread of silk. \_\_\_\_\_
4. The outer covering which the silkworm covers itself and has the silk fibre. \_\_\_\_\_
5. The process of taking out silk thread from the cocoon. \_\_\_\_\_

#### D. Match the following:-

- |                    |                   |
|--------------------|-------------------|
| 1. Wool            | a) Antiseptic     |
| 2. shearing        | b) Cocoon         |
| 3. Fibroin         | c) Silk moth eggs |
| 4. Scouring        | d) Protein        |
| 5. Mulberry leaves | e) Washing        |

#### E. Multiple Choice Questions:-

1. The life cycle of a silkworm is  
(a) eggs, larva, pupa, adult                      (b) eggs, pupa, larva, adult  
(c) eggs, larva, adult, pupa                      (d) larva, adult, egg, pupa

2. Which of these is not an animal fibre?  
 (a) Angora                      (b) Wool                      (c) Silk                      (d) Jute
3. The practice of rearing silkworms for silk is called  
 (a) pisciculture              (b) agriculture              (c) sericulture              (d) apiculture
4. Sorter's disease is a fatal  
 (a) blood disease              (b) skin disease              (c) heart disease              (d) lung disease
5. Silkworms breed well in or during  
 (a) winter                      (b) summer                      (c) rains                      (d) spring

**F. Complete the following Table.**

Step	Procedure
1. Shearing	
2. _____	The sheared skin with thick coat of hair is then washed thoroughly in tanks to remove grease, dirt and dust.
3. _____	The dyed fibres are passed through metal teeth to straighten them.
4. Spinning	

**G. Answer the following:-**

1. Give two examples of animal fibres.
2. Define shearing. How is shearing done?
3. What is sericulture?
4. What is a cocoon?
5. Name five animals from which wool is obtained.
6. What are occupational hazards? Give example also.
7. Draw and describe the life cycle of a silk moth.
8. Explain the steps involved in the processing of fibres into wool.