WORKSHEET 1

CHAPTER 5 – TRANSPIRATION

A. Name the following.

1. The process of loss of water in the form of droplets.
2. The waxy layer on the epidermis of the leaf meant to reduce transpiration.
3. Small openings present on the bark of woody stems.
4. A chemical used to prevent excessive transpiration in plants.
5. The apparatus used to record the rate of transpiration in plants.

B. Choose the correct option.

1. Forests contribute in bringing rain by
   a. bleeding. b. transpiration. c. guttation. d. all of these.
2. Transpiration will be fastest when the day is
   a. hot, dry and windy. b. hot, humid and cool wind.
   c. humid and windy. d. hot, humid and no wind.
3. Maximum transpiration is through
   a. lenticel. b. stomata. c. cuticle. d. root surface.
4. Loss of water as droplets from hydathodes is called
   a. transpiration. b. bleeding. c. guttation. d. evaporation.
5. With increase in atmospheric pressure, the rate of transpiration will
   a. increase. b. decrease. c. remain steady. d. slowly increase.

C. Fill in the blanks.

1. In *Nerium*, stomata are _____
2. _____ transpiration is a way of maximum water loss by a plant.
3. Guttation occurs through _____
4. Folded leaves _____ transpiration.
5. The phenomenon of loss of water through a cut stem or injured part of plant is called _____

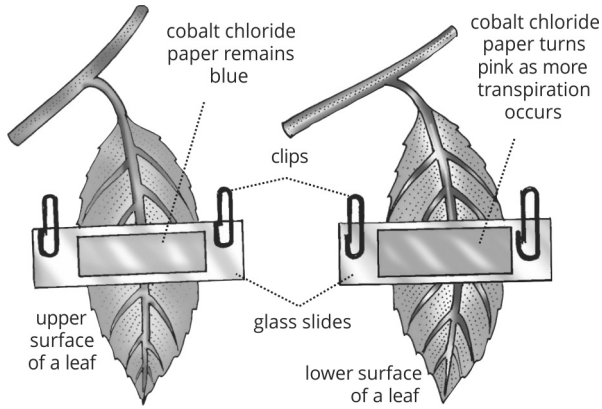
D. State whether the following statements are True or False.

1. Leaves are reduced to spines in xerophytic plants.
2. Transpiration takes place in green pants.
3. The upper surface of the leaves transpires more.
4. Moist cobalt chloride paper is blue in colour.
5. The rate of transpiration will be more if the air is humid.

Name: ..... Teacher's signature: .....

Class: X Date: .....

E. Given is an experiment set-up to demonstrate a particular process. Study the same and answer the questions that follow.



1. Name the physiological process being studied.
2. Explain the process mentioned above.
3. What is the aim of the above experiment?
4. What would you observe in the experimental set-up after an hour? Give a reason to support your answer.
5. Mention any three adaptations found in plants to overcome the physiological process mentioned in Q.1 above.

ANSWERS

WORKSHEET 1

A. Name the following.

1. Guttation
2. Cuticle
3. Lenticels
4. Phenyl mercuric acid
5. Ganong's potometer.

B. Choose the correct option.

1. b. 2. a. 3. b. 4. c. 5. b.

C. Fill in the blanks.

1. sunken
2. Stomatal
3. hydathodes
4. reduce
5. bleeding

D. State whether the following statements are True or False.

1. True 2. True 3. False 4. False 5. False

E. Given is an experiment set-up to demonstrate a particular process. Study the same and answer the questions that follow.

1. Transpiration
2. Transpiration is the loss of water vapour from the aerial parts of a plant. The rate of transpiration is more during the day time. More transpiration occurs from the lower surface a dorsiventral leaf as compared to upper surface.
3. Aim is to show that more transpiration occurs from the lower surface of a dorsiventral leaf as compared to upper surface.
4. The cobalt chloride paper on the ventral surface turns pink faster than the dorsal side as more stomata are present on the ventral surface. Hence, more transpiration.
5. i. Sunken stomata

   ii. Thick cuticle

   iii. Narrow leaves