

**SSR Degree and PG college(A)**

**Department of Botany**

**Semester II**

**Paper IV: Plant physiology**

**Internal I Question Bank**

**I. Multiple Choice Questions (MCQs)**

1. Transpiration mainly occurs through:

- a) Cuticle
- b) Lenticels
- c) Stomata
- d) Roots

Answer: c) Stomata

2. The driving force for water movement in plants is:

- a) Osmosis
- b) Diffusion
- c) Transpiration pull
- d) Active transport

Answer: c) Transpiration pull

3. SPAC stands for:

- a) Soil Plant Air Continuum
- b) Soil Plant Atmosphere Continuum
- c) Soil Plant Active Cycle
- d) Soil Pressure Air Cycle

Answer: b) Soil Plant Atmosphere Continuum

4. Which micronutrient is part of chlorophyll synthesis?

- a) Zinc
- b) Iron
- c) Copper
- d) Boron

Answer: b) Iron

5. Passive absorption of minerals depends on:

- a) ATP
- b) Respiration
- c) Transpiration
- d) Enzymes

Answer: c) Transpiration

6. The site of light reaction is:

- a) Stroma
- b) Cytoplasm
- c) Thylakoid membrane
- d) Nucleus

Answer: c) Thylakoid membrane

7. The primary pigment in photosynthesis is:

- a) Chlorophyll b
- b) Carotene
- c) Chlorophyll a
- d) Xanthophyll

Answer: c) Chlorophyll a

8. Photophosphorylation produces:

- a) Glucose

- b) ATP
- c) NADH
- d) Oxygen

Answer: b) ATP

9. The first stable product of the  $C_3$  cycle is:

- a) PEP
- b) RuBP
- c) PGA
- d) Oxaloacetate

Answer: c) PGA

10. CAM plants open stomata during:

- a) Day
- b) Night
- c) Noon
- d) Evening

Answer: b) Night

## II. Fill in the Blanks

1. Loss of water in the form of vapour from aerial parts is called \_\_\_\_.

Answer: Transpiration

2. Opening and closing of stomata is regulated by \_\_\_\_ cells.

Answer: Guard

3. Movement of water from soil to atmosphere through plant is called \_\_\_\_ continuum.

Answer: SPAC

4. Iron deficiency leads to \_\_\_\_ in young leaves.

Answer: Chlorosis

5.Active absorption of minerals requires \_\_\_\_ energy.

Answer: ATP

6.Photosynthesis occurs in \_\_\_\_ organelles.

Answer: Chloroplasts

7.The pigment that absorbs maximum light is \_\_\_\_.

Answer: Chlorophyll a

8.The C<sub>4</sub> cycle first forms \_\_\_\_ as a stable product.

Answer: Oxaloacetic acid

9.Photorespiration occurs in \_\_\_\_, peroxisome and mitochondria.

Answer: Chloroplast

10.The enzyme involved in carbon fixation in C<sub>3</sub> plants is \_\_\_\_.

Answer: RuBisCO

### III. Descriptive questions

1.A. Describe about SPAC concept?

(Or)

B. Explain the role of micro nutrients in plant nutrition?

2.A. write about photosystems I and II?

(Or)

B. Describe about photorespiration?