

SSR Degree and PG college(A)

Department of Botany

Semester II

Paper IV: Plant physiology

Internal II Question Bank

I. Multiple Choice Questions (MCQs)

1. The hormone responsible for cell elongation is:

- a) Cytokinin
- b) Auxin
- c) Ethylene
- d) ABA

Answer: b) Auxin

2. Which hormone promotes stem elongation and bolting?

- a) Ethylene
- b) Gibberellin
- c) ABA
- d) Cytokinin

Answer: b) Gibberellin

3. The "stress hormone" in plants is:

- a) Auxin
- b) Cytokinin
- c) Abscisic acid
- d) Ethylene

Answer: c) Abscisic acid

4. Photoperiodism is controlled by:

- a) Chlorophyll
- b) Phytochrome
- c) Auxin
- d) Gibberellin

Answer: b) Phytochrome

5. Seed dormancy is mainly induced by:

- a) Gibberellin
- b) Cytokinin
- c) ABA
- d) Auxin

Answer: c) ABA

6. The enzyme responsible for nitrogen fixation is:

- a) Nitrate reductase
- b) Nitrogenase
- c) RuBisCO
- d) Amylase

Answer: b) Nitrogenase

7. Nitrate is reduced to nitrite by:

- a) Nitrogenase
- b) Nitrite reductase
- c) Nitrate reductase
- d) Catalase

Answer: c) Nitrate reductase

8. The final product of nitrogen assimilation is:

- a) Glucose

b) Protein

c) Lipid

d) Starch

Answer: b) Protein

9. Sulphur is mainly absorbed by plants in the form of:

a) SO_2

b) H_2S

c) Sulphate (SO_4^{2-})

d) Elemental sulphur

Answer: c) Sulphate (SO_4^{2-})

10. Calmodulin is a protein that binds with:

a) Sodium

b) Calcium

c) Potassium

d) Magnesium

Answer: b) Calcium

II. Fill in the Blanks

1. The hormone responsible for apical dominance is _____.

Answer: Auxin

2. _____ hormone delays senescence in plants.

Answer: Cytokinin

3. Conversion of vegetative phase to flowering phase is called _____.

Answer: Photoperiodism

4. The pigment involved in light perception for flowering is _____.

Answer: Phytochrome

5. Breaking of seed dormancy can be done using ____ hormone.

Answer: Gibberellin

6. Biological nitrogen fixation converts atmospheric nitrogen into ____.

Answer: Ammonia

7. Nitrite is reduced to ammonia by ____ reductase.

Answer: Nitrite

8. The main amino acid formed during nitrogen assimilation is ____.

Answer: Glutamate

9. Sulphur is essential for synthesis of amino acids like ____.

Answer: Cysteine

10. Protein phosphorylation involves addition of ____ group.

Answer: Phosphate

III. Descriptive questions

1.A. Explain the general role of gibberellins?

(Or)

B. Describe the role of phytochrome in photoperiodism?

2.A. Describe the structure of nitrate reductase?

(Or)

B. Explain the role of calmodulin in protein phosphorylation?