Biyani Girls College

Botany-III

Model test paper-A

Plant physiology and biochemistry

Time allowed: 3hrs
Max.Marks=34

Q1. Give short answer of the following :- **20 X 0.5 = 10**

- Write the name of two diseases which arise due to mineral deficiency?
- Name 2 CAM plants.
- Give full form of ATP.
- Give the empirical formula of glucose sugar.
- Who proposed lock and key theory of enzymes?
- What is formed when apoenzyme and coenzyme combine?
- What is viviparity?
- Who proposed ringing experiments?
- Who proposed cohesion tension theory?
- Define vernalization.
- What are growth inhibitors? give example.
- Which is sweetest sugar?
- Define DPD?
- What is leghaemoglobin?
- Who discovered a-oxidation of fatty acids?
- What is connecting link between glycolysis and kreb cycle?
- In mimosa pudica which type of polant movement is found?
- What are basic unit of protein?
- Which instrument is used to measure plant growth?

- Which scientist performed the avena curvature test?

Q 2 Describe the mechanism of stomatal action. **(6)**

Or

Write short on following:-

- DPD and water potential
- Theory by Dixon and jolly
- Root pressure

Q 3 Describe kreb cycle in detail. **(6)**

Or

Explain active and passive absorption in plants with the help of diagram

Q4 With the help of diagrams explain the structure of proteins. **(6)**

Or

Write short note on(any2):

- Co-enzyme and apoenzyme
- Lock and key theory
- β–Oxidation

Q5 Discuss the physiology of flowering with special reference to photoperiodism. **(6)**

Or

Write short note on(any2):

- Effect of auxin on plant
- Photoperiodism and Geotropism
- Biological clock

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Model test paper-B

Plant Physiology and Biochemistry

Time allowed: 3hrs
Max.Marks=34

Give short answer of the following :- **20 X 0.5 = 10**

1. What are two solution with same concentration called?

2. Which isotope was used to study the direction of translocation

3. What is the first stable product of dark reaction in C_3 plants.

4. Who proposed induced fit theory.

5. In plant *Helianthus annus* which type of plant movement is found.

6. Why do grapes dipped in strong sugar solution show shrinkage.

7. Where does Photo respiration take place.

8. In which organelles is fat generally stored.

9. What is wilting coefficient

10. Guard cell help in _____.

11. What is RQ.

12. What is pH.

13. Who discovered tricarboxylic acid cycle.

14. How many molecules of NADH and ATP are synthesized in one turn of kreb's cycle.

15. Amino acids are building blocks of _____.

16. What is *Gibberella fusikori.*

17. Which plant hormone is primarily involved in inducing cell division.

18. Sunken stomata are seen in_____.

19. _____ have more than unit RQ.

20. Write full names of PGAL and PGA.

Q 2 Write short note on following:- (6)

- Hydroponics
- Water potential

Or

What is transpiration. Describe its mechanism and control factors. (6)

Q3 Write short note on following:- **(6)**

a) ETS

b) Photorespiration

Or

Give a detailed account of Glycolysis.

Q4 Describe properties classification and biosynthesis of amino acids (6)

Or

Describe mechanism of enzyme action.

Q5. Write short note on following (any2):- **(6)**

a) Sigmoid curve

b) Apical Dominance

c) Phytochrome

Or

Write in detail about discovery and effects of gibberellin on plants.