

23P329

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Name:

Reg.No:

THIRD SEMESTER M.Sc DEGREE EXAMINATION, NOVEMBER 2024

(CBCSS - PG)

(Regular/Supplementary/Improvement)

CC19P BOT3 C07 - PLANT PHYSIOLOGY, METABOLISM AND BIOCHEMISTRY

(Botany)

(2019 Admission onwards)

Time : 3 Hours

Maximum : 30 Weightage

Part-A

Answer any *four* questions. Each question carries 2 weightage.

1. Explain briefly cohesion - tension theory.
2. Mention the factors causing dormancy of seeds.
3. Isoenzymes are multiple forms of the same enzyme, Respond.
4. Some nucleotides are intermediates in cellular communications. Respond and estimate.
5. Explain the β pleated structure of proteins.
6. Cells and Organisms Interconvert Different Forms of Energy. Discuss.
7. Hydrogen bonding gives water its unusual properties. Summarize.

(4 × 2 = 8 Weightage)

Part-B

Answer any *four* questions. Each question carries 3 weightage.

8. Explain briefly nitrogen fixation in leguminous plants.
9. Explain the difference between C3 plants and C4 plants.
10. Explain the different strategies adopted by plants for tolerating heat stress.
11. Provide a note on the fate of pyruvate under aerobic and anaerobic conditions.
12. Draw the cytochrome aa3 complex.
13. Primary metabolism and secondary metabolism are according to Bonner and Galston highways and byways of metabolism. Respond.
14. Explain alkaloids in detail.

(4 × 3 = 12 Weightage)

Part-C

Answer any *two* questions. Each question carries 5 weightage.

15. Explain the phytochrome mediated photomorphogenic responses in plants.

16. Draw the different routes of entry of aminoacids to the TCA cycle.
17. Provide a note on the β -oxidation of fatty acids.
18. Describe the fitness of aqueous environment for living organisms.

(2 × 5 = 10 Weightage)
