

THIRD SEMESTER M.A./M.Sc./M.Com. DEGREE (REGULAR)
EXAMINATION, NOVEMBER 2020

(CBCSS)

Botany

BOT 3C 07—PLANT PHYSIOLOGY, METABOLISM AND BIOCHEMISTRY

(2019 Admissions)

Time : Three Hours

Maximum : 30 Weightage

Section A

Answer at least three questions.

Each question carries 2 weightage.

All questions can be attended.

Overall Ceiling 6.

1. Differentiate reductive and trans amination process, cite suitable examples.
2. What are cryptochromes ? Give an account on functional features.
3. What are isoenzymes ? Add a note on its evolutionary significance.
4. Give an account on structural features of ATP synthase enzyme.
5. How amino acids are classified based on polarity ?
6. Enlist sugar derivatives of biological importance.
7. What is meant by 'soil-plant atmosphere continuum'.

(3 × 2 = 6 weightage)

Section B

Answer at least three questions.

Each question carries 4 weightage.

All questions can be attended.

Overall Ceiling 12.

8. Explain modern theories of stomatal mechanism.
9. Illustrate CAM and its significance.

Turn over

10. List important physiological functions of auxins.
11. Give an account on physiological effects of water stress.
12. Explain Michaelis-Menten equation and its significance.
13. Explain TCA cycle and its amphibolic nature.
14. What are important classes of lipids ? Explain with suitable examples.

(3 × 4 = 12)

Section C

*Answer at least two questions.
Each question carries 6 weightage.
All questions can be attended.
Overall Ceiling 12.*

15. Give an elaborate account on genetic and hormonal regulation of development.
16. Compare C3 and C4 mode of carbon fixation.
17. Explain oxidative phosphorylation. Add a note on most accepted theory to explain mechanism of ATP synthesis.
18. Describe structural features of protein.

(2 × 6 = 12)