

Final M.Sc., Degree Examinations

September/October 2015

(Directorate of Distance Education)

BOTANY

DPB510 : Paper V : Plant Physiology

Time: 3 hrs.]

[Max.Marks:75/85

Instructions :

1. Answer all Questions.
2. Repeaters shall answer questions from Section A, B and C only (Marks 75)

SECTION -A

I. Write brief notes on any SEVEN of the following:

7X3 =21

1. Vander Waal's forces.
2. Casparian thickenings
3. Potamogeton type of stomata
4. Phytochrome
5. M. Calvin
6. Carotenoids
7. Matrix
8. NADP⁺
9. Diffusion pressure deficit
10. Biological clock

SECTION -B

II. Write brief notes on any THREE of the following:

3X8 =24

11. Stomatal apparatus
12. Methods of studying plant nutrition
13. Symplastic and apoplastic pathways
14. History and significance of photosynthesis
15. Ascent of sap

Contd...2

SECTION -C

III. Answer any TWO of the following:

2X15 =30

16. Write an account of EMP pathway and TCA cycle in respiration. Append a note on oxidative phosphorylation.
17. Give a comparative account of C₃ and C₄ pathways. Add a note on CAM plants.
18. Write an account of phytohormones and add a note on their applications.
19. Describe existence of rhythmic component in photoperiodic behavior.

SECTION -D

This Section shall be answered only by Freshers having 85 marks as paper maximum in addition to Section A, B and C

IV. Answer any ONE of the following:

1X10 =10

20. Describe pentose phosphate pathway.
21. Explain the phenomenon vernalization and write its significance.

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