

Government of Karnataka
Forest Department
Recruitment examination (main) for Range Forest Officer training 2007
Optional paper: BOTANY
05 November-2007 (2.30 pm to 5.30 pm)

Max. Marks: 100

Time: 3 Hours

All Sections are compulsory

SECTION A

Explain the meaning of the following in one or two sentences (1 mark each)

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|-------------------|-----------------------|-------------------|
| 1. Cleistogamy | 8. Transfusion tissue | 15. Triple fusion |
| 2. Trophic levels | 9. Cohesive force | 16. Phyllode |
| 3. Rhizophore | 10. Hydathode | 17. PAN |
| 4. Synangium | 11. Transposon | 18. RET species |
| 5. Palea | 12. Codon | 19. Retinacula |
| 6. Syconus | 13. Suicide bags | 20. Carinal canal |
| 7. Digitoxin | 14. Tapetum | |

SECTION B

Write short notes on any **Five** of the following: (4 marks each)

1. Reproduction in Cyanobacteria.
2. Salient features and economic importance of Solanaceae.
3. Mechanical tissue system.
4. Nastic movements in plants
5. Back cross and test cross methods.
6. Morphological and anatomical adaptations of epiphytes.
7. Scientific name and family of four medicinal plants of Karnataka.
8. Plasmids and their significance.

SECTION C

Answer any **Five** of the following: (12 marks each)

1. Discuss the Engler and Prantl system of classification and comment on its merits and demerits.
2. Give a detailed account of apical meristems.
3. Discuss in detail the structural and functional aspects of a pond ecosystem.
4. Explain the methods adopted for the *in situ* conservation of biodiversity.
5. Give a detailed account of Tikka disease of ground nut.
6. Explain the types of transpiration and add a note on the factors affecting transpiration.
7. Give a brief account on structure and function of eukaryotic cell organelles.
8. Outline the phenomenon of photoperiodism. Add a note on its practical applications.

