M.Sc. (Previous) Degree Examination August / September 2009

Directorate of Distance Education

BOTANY (FRESHERS)

Paper - I : DPA - 510 : "Biology and Diversity of Algae, Fungi, Bryophytes, Pteridophytes and Gymnosperms"

Time : 3 Hours | Max. Marks : 85

I. Answer any SEVEN of the following: **7x4=28**

1. Tetrasporophyte.
2. Pigments in Rodophyceae
3. Vegetative reproduction in fungi
4. Life cycle of Phytophthora species
5. Ultra structure of yeast cell
6. Edible mushrooms
7. Male cone of Pinus
8. Sporophyte of Ophioglassum
9. Distribution of Cycas.
10. Vegetative reproduction in Marchantia

II. Answer any THREE of the following: **3x9=27**

11. Write the economic importance of fungi.
12. Explain the methods of sexual reproduction in Chlorophyceae.
13. Explain the importance of stelar evolution.
14. Explain the life-cycle in Anthocerous
15. Give an account of the evolutionary significance of Cycadales.

III. Answer any TWO of the following: **2x15=30**

16. Mention the salient features of pteridophytes. Add a note on their economic importance.
17. Give a comparative account of asexual reproduction in Xanthophyceae and Phaeophyceae.
18. Describe the structure and development of megasporophyll of Cycas.
19. Give a comparative account of sexual reproduction in Phycomycetes and Ascomycetes.

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M.Sc. (Previous) Degree Examination August / September 2009

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BOTANY (FRESHERS)

Paper - II : Diversity of Angiosperms and Plant Taxonomy

Time : 3 Hours | Max. Marks : 85

I. Answer any SEVEN of the following: **7x4=28**

1. Androceium of Lythraceae
2. Discontinuous distribution
3. Economic importance of Meliaceae
4. Metachlamydae
5. Inflorescence of poaceae
6. Evolutinary significance of Scrophulariaceae
7. Herbanium
8. Define a species with an example.
9. Author Citation
10. Chemotaxonomy

II. Answer any THREE of the following: **3x9=27**

11. State the principles of ICBN.
12. Numerical Taxonomy
13. Diagnostic characteristics of Malvaceae
14. Plant diversity in socio-economic development
15. Monocot flower

III. Answer any TWO of the following: **2x15=30**

16. Explain phytogeographic regime of India.
17. Describe diagnostic features of Orchidaceae add a note on their economic importance.
18. Explain the importance of embryological features in classification and phylogeny of flowering plants.
19. Outline Betham and Hooker system of classification. Add a note on its merits and demerits.

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DPA 530

M.Sc. (Previous) Degree Examination, August / September 2009

Directorate of Distance Education

BOTANY (FRESHERS)

Paper - III : Plant Ecolgy and Plant Geography

Time : 3 Hours

Max. Marks : 85

Note:(1) Answer all the questions.
(2) Draw diagrams wherever necessary

I. Answer any SEVEN of the following: **7x4=28**

1. Food chain
2. Decomposers
3. Ecesis
4. Synecology
5. Primary productivity
6. Greenhouse effect
7. Ecosystem model
8. Microclimate
9. Electromagnetic spectrum
10. Bioenergetics

II. Answer any THREE of the following: **3x9=27**

11. Flow of energy in the eco system.
12. Biomagnification
13. Concept of ecological succession
14. Dispersal mechanisms
15. Mechanism of dispersal in plants.

III. Answer any TWO of the following: **2x15=30**

16. Write the sources and effects of primary air pollutants.
17. Describe the structure and function of lentic ecosystem.
18. Give a detailed account of origin and distribution of coffee and tea.
19. Discuss the biogeochemical cycle with an illustration from gaseous cycle.

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M.Sc. (Previous) Degree Examination August / September 2009

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MICROBIOLOGY

(FRESHERS)

Paper - IV

Time : 3 Hours | Max. Marks : 85

I. Answer any SEVEN of the following: **7x4=28**

1. Alexopolus
2. Clostridium
3. Streak - plate
4. Moist heat
5. Flagella
6. Cultivation of virus
7. Condensed milk
8. Nitrogenase
9. Pencillin
10. MPN

II. Answer any THREE of the following: **3x9=27**

11. Principle and working of bright field microscopy
12. Chemical sterilization techniques
13. Fungal spares
14. Sexual reproduction in bacteria
15. Water borne diseases

III. Answer any TWO of the following: **2x15=30**

16. Give an account on structure and reproduction in fungal cell.
17. Explain the process of nitrogen fixation in soil.
18. Describe the methods of air sampling.
19. Give a detailed account on history and scope of microbiology.

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