Q.P. Code – 56721

Previous M.Sc. Degree Examination
OCTOBER/NOVEMBER 2014
(Directorate of Distance Education)
Botany

(DPA 510) Paper I – BIOLOGY AND DIVERSITY OF ALGAE, FUNGI, BRYOPHYTES, PTERIDOPHYTES AND GYMNOSPERMS

Time : 3 Hours] *[Max. Marks : 75/85*

Instructions to Candidates :

1) *Answer **all** questions.*

2) *Repeaters shall answer questions from Section A, B and C only (Marks 75).*

SECTION – A

I. Answer any **SEVEN** of the following : **7 × 3 = 21**

1. Palmella stage

2. Red alga

3. Ascus

4. Fruticose lichen

5. Columella

6. Capsule

7. Mixed protostele

8. Vallecular canal

9. Resin duct

10. Pits

SECTION – B

II.   Write short notes on any **THREE** of the following :   **3 × 8 = 24**

11.   Classification of plant kingdom

12.   Anatomy of *Cycadales*

13.   Life history of *Phytophthora*

14.   Characteristics of *Sphenopsida*

15.   Sexual reproduction in *Marchantia*

SECTION – C

III. Answer any **TWO** of the following :   **2 × 15 = 30**

16.   Give an account of heterospory and seed habit.

17.   Give an account of classification and economic importance of Lichens.

18.   Explain the salient features of Gnetales and add a note on its angiospermic characters.

19.   Comparative account on thallus organization in Rhodophyceae and Phacophyceae.

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 :   **1 × 10 = 10**

20.   Write an account on the life cycle of Psilopsida.

21.   Describe the origin and evolution of land plants.

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Q.P. Code – 56722

Previous M.Sc. Degree Examination
OCTOBER/NOVEMBER 2014
(Directorate of Distance Education)
Botany
(DPA 520) Paper II – DIVERSITY OF ANGIOSPERMS AND PLANT TAXONOMY

Time : 3 Hours]   *[Max. Marks : 75/85*

Instructions to Candidates :

    1)   *Answer **all** questions.*

    2)   *Repeaters shall answer questions from Section A, B and C only (Marks 75).*

SECTION – A

I.   Answer any **SEVEN** of the following :   **7 × 3 = 21**

1.   Karyotype

2.   Placentation

3.   Holotype

4.   Paris code

5.   Corona

6.   Bicarpellatae

7.   Endosperm

8.   Hutchinson

9.   Spikelet

10.   Flowers in Compositae

SECTION – B

II.   Write short notes on any **THREE** of the following :   **3 × 8 = 24**

11.   Engler & Prantl's system of classification

12.   Cytology as a taxonomic tool

13. Endemism in Western Ghats

14. Give an account of Nymphaeaceae

15. Sustainable utilization of bioresources

SECTION – C

III. Answer any **TWO** of the following :   **2 × 15 = 30**

16. Give an account of Bentham & Hooker's system of classification. Add a note on its merits and demerits.

17. Explain with examples the use of phytochemistry in plant taxonomy.

18. Give the diagnostic characters of

    (a) Meliaceae

    (b) Apocyanaceae

    (c) Zingiberaceae

19. Write on the importance of plant diversity in socio-economic development.

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 :   **1 × 10 = 10**

20. Describe the characters of the families Scrophulariaceae and Orchidaceae.

21. Give an account of valid and effective publication of a species.

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Q.P. Code – 56723

Previous M.Sc. Degree Examination
OCTOBER/NOVEMBER 2014
(Directorate of Distance Education)
Botany
(DPA 530) Paper III – PLANT ECOLOGY AND PLANT GEOGRAPHY

Time : 3 Hours] [*Max. Marks : 75/85*

Instructions to Candidates :

    1) *Answer **all** questions.*

    2) *Repeaters shall answer questions from Section A, B and C only (Marks 75).*

SECTION – A

I.   Answer any **SEVEN** of the following :   **7 × 3 = 21**

1.   R. Mishra

2.   IBP

3.   Limnology

4.   CFCs

5.   Eutrophication

6.   Vitality

7.   Thermal stratification

8.   Phytoplankton

9.   Pangea

10.   Acclimatization

SECTION – B

II.   Write short notes on any **THREE** of the following :   **3 × 8 = 24**

11.   Paleotropics and Neotropics

12.   Classification and types of pollutants.

13. Autecology

14. Microclimate

15. Principles of phytogeography

SECTION – C

III. Answer any **TWO** of the following : 2 × 15 = 30

16. Write an essay on species dispersal and dispersal mechanisms.

17. Describe various types of interactions among populations.

18. Explain the mechanism of energy flow and mineral cycling.

19. Discuss the effect of water pollution on human health.

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 : 1 × 10 = 10

20. Discuss the effect of global warming on ecosystem.

21. Describe the general process involved in plant succession. Add a note on climax community.

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Q.P. Code – 56724

Previous M.Sc. Degree Examination
OCTOBER/NOVEMBER 2014
(Directorate of Distance Education)
Botany
(DPA 540) Paper IV – MICROBIOLOGY

Time : 3 Hours] [*Max. Marks : 75/85*

Instructions to Candidates :

1) *Answer **all** questions.*

2) *Repeaters shall answer questions from Section A, B and C only (Marks 75).*

SECTION – A

I. Answer any **SEVEN** of the following : **7 × 3 = 21**

1. Actinobacteria

2. Yogurt

3. Microbial proteases

4. Aeroallergens

5. Pasteurization

6. Negative staining

7. Rhizobium

8. Rotorod sampler

9. Salmonella

10. Cheese

SECTION – B

II. Write short notes on any **THREE** of the following : **3 × 8 = 24**

11. Classification of fungi

12. Physical methods of sterilization

13. Phase contrast microscopy

14. Structure of viruses

15. Bacteriological examination of water

16. Production of vaccines from microbes

17. Methods of food preservation and control of food poisoning.

SECTION – C

III. Answer any **TWO** of the following : 2 × 15 = 30

18. Discuss the industrial application of microbes.

19. Describe the ultrastructure and reproduction in bacteria.

20. Write an account on microflora of soil and add a note on the importance of nitrogen fixation.

21. Write on the principles and working of electron microscope.

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 : 1 × 10 = 10

22. Briefly elucidate the recent advances in the field of microbiology.

23. Discuss the microbiology of dairy products.

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