

B.Sc. I Year (PRACTICAL) Model Paper

Subject : BOTANY

Paper – I
(Microbial Diversity, Cryptogams and Gymnosperms)

[Effective from the academic year 2008-09]

Time: 3 Hours

Max. Marks. 50

Note: Answer **All** questions. Draw well labelled diagrams wherever necessary.

- I. Identify the algal components (A,B,C) in the given mixture. Draw labelled diagrams, classify and identify giving important characters [Diagrams – 1; classification – 1; characters – 2] **(3x4=12 Marks)**
- II. Describe the procedure of bacterial staining and identify the given Bacterium (D) [Procedure – 2;Description – 1;Identification – 1] **(4)**
- III. Prepare T.S. of the diseased material as a temporary mount (E). Identify the pathogen giving reasons and describe with the help of diagrams. (Preparation – 2; Identification – 1; Diagram – 1; Description – 1; Classification- 1) **(6)**
- IV. Prepare T.S. of the given material – Pteridophyte/Gymnosperm (F) as a single stain temporary mount and identify with diagnostic features and provide suitable diagrams. (Slide Preparation – 2; Classification – 1; Diagram – 2; Description – 3) **(8)**
- V. Identify giving reasons the specimens and slides (G,H,I,J,K and L) (Viruses/Fungi – 1;Bryophyta – 2;Pteridophyta&Gymnosperms – 3) **(6x2½=15)**
- VI. Record **(5)**

FACULTY OF SCIENCE

B.Sc. I Year (Practical) Examination

Subject : BOTANY

Paper – I

(Microbial Diversity, Cryptogams and Gymnosperms)

QUESTION BANK

W.E.F. Annual 2009

Time : 3 Hours}

{Max. Marks: 50

Note : Answer **All** questions. Draw well labeled diagrams wherever necessary.

- I.** Identify the algal components (A,B,C) in the given mixture. Draw labeled diagrams, classify and identify giving important characters [Diagrams – I: classification – 1; characters – 2] (3x4=12 marks)
1. Oscillatoria
 2. Nostoc
 3. Volvox
 4. Oedogonium
 5. coleochaete
 6. Chara
 7. Ectocarpus
 8. Polysiphonia
- II.** Describe the procedure of bacterial staining and identify the given Bacterium (D) [Procedure – 2; Description – 1 Identification – 1] (4)
9. Gram + Bacteria
 10. Gram – Bacteria
- III.** Prepare T.S. of the diseased material as a temporary mount (E). Identify the pathogen giving reasons and describe with the help of diagrams. (Preparation – 2; Identification – 1; Diagram – 1; Description – 1; Classification – 1) (6)
11. White rust on crucifers
 12. Rust on sorghum
 13. Tikka disease of groundnut
- IV.** Prepare T.S. of the given material – Pteridophyte / Gymnosperm (F) as a single stain temporary mount and identify with diagnostic features and provide suitable diagrams. (Slide Preparation – 2; Classification – 1; Diagram – 2; Description – 3) (8)
14. Lycopodium stem
 15. Equisetum stem
 16. Marsilea Petiole / Rhizome
 17. Pinus needle
 18. Gnetum stem
 19. Gnetum leaf

- V. Identify giving reasons the specimens and slides (G, H, I, J, K and L)
(viruses /Fungi – 1; Bryophyta – 2; Pteridophyta / Gymnosperms – 3)
(6x2½=15)

SPECIMENS :

20. Tobacco Mosaic virus
21. Bendi Yellow Vein clearing
22. Papaya leaf curl
23. Ergot of Bajra
24. *Puccinia* rust on wheat
25. *Puccinia* rust on Barberry
26. Head smut of sorghum
27. Whip smut of sugarcane
28. Tikka disease of Groundnut
29. Brown leaf spot of rice
30. Blast of Rice (Paddy)
31. crustose lichen
32. Foliose lichen
33. Fruticose lichen
34. Marchantia thallus with Gemma cups
35. Marchantia thallus with Antheridiophore
36. Marchantia thallus with Archegoniophore
37. Anthoceros Thallus
38. Anthoceros with Sporophyte
39. Polytrichum with Sporophyte
40. Lycopodium with cone
41. Equisetum with cone
42. Marsilea with sporocarp
43. Pinus male cone
44. Pinus female cone
45. Gnetum twig
46. Gnetum male cone
47. Gnetum female cone

SLIDES:

48. Albugo conidia
49. Albugo oospores
50. Saccharomyces vegetative / budding
51. Penicillium conidia
52. Penicillium ascocarp
53. *Puccinia* uredial stage
54. *Puccinia* telial stage
55. *Puccinia* pycnial stage
56. *Puccinia* aecial stage
57. *Alternaria* conidia
58. Marchantia thallus V.S.
59. Marchantia thallus with Gemma cups
60. Marchantia antheridiophore L.S.
61. Marchantia archegoniophore L.S.
62. Marchantia sporophyte V.S.
63. Anthoceros thallus V.S.
64. Anthoceros thallus with antheridia
65. anthoceros thallus with archegonia
66. Anthoceros sporophyte L.S.
67. Anthoceros sporophyte T.S.
68. Polytrichum leaf T.S.
69. Polytrichum stem T.S.
70. Polytrichum antheridial branch
71. Polytrichum archegonial branch

72. Polytrichum capsule L.S.
73. Polytrichum protonema
74. Rhynia (Fossil slide)
75. Lycopodium strobilus L.S.
76. Equisetum strobilus L.S.
77. Marsilea sporocarp V.S.
78. Cycadeoidea (Fossil Slide)
79. Pinus male cone V.S.
80. Pinus pollen grains
81. Pinus female cone V.S.
82. Pinus ovule V.S.
83. Gnetum male cone V.S.
84. Gnetum female cone V.S.
85. Gnetum ovule V.S.

VI. Record

(5)