

2015

BOTANY

[Honours]

PAPER – I (New)

Full Marks : 90

Time : 4 hours

The figures in the right hand margin indicate marks

Candidates are required to give their answers in their own words as far as practicable

Illustrate the answers wherever necessary

[NEW SYLLABUS]

GROUP – A

1. Answer any *ten* questions of the following : 2×10
 - (a) What is lomentum fruit ? Give example.
 - (b) What are 'ergot fungi' ?

- (c) Write down the name of causal organism of 'blight of betel'.
- (d) What are syngenesious stamen? Give example.
- (e) Which component of Gram positive and Gram negative bacteria shows antigenic property?
- (f) What is gynostegium? Where is it found?
- (g) Write down two unique properties of myxomycetes.
- (h) What is 'fairy ring'?
- (i) What are interferons?
- (j) What is Mc Donald Pfitzer law?
- (k) Give example each of a medicinal and a dye-yielding lichen.
- (l) Who proposed five kingdom concept? What is the position of bacteria in this classification system?

- (m) Name any two reserve materials found in bacteria.
- (n) What is Brachymeiosis ?
- (o) What is binal symmetry of virus ? Give example.

GROUP – B

Answer any **five** questions : 8 × 5

2. Write down salient features of Phaeophyta. 8
3. Classify fungi as per Ainsworth (1973) upto subdivisions with characters and examples. 8
4. Classify dry dehiscent fruits. Define and give example of each type. 8
5. Explain different phases of a bacterial growth curve in batch culture with suitable diagram. Why does the lag and stationary phases remain parallel to the X-axis in a bacterial growth curve ? 5 + 1 + 2
6. Discuss lysogenic cycle as found in lambda phage. 8

7. What are the different types of cymose inflorescences found in plants ? Give example of each type. 8
8. Give an outline of the sexual reproduction of *Synchytrium*. Name the group of fungi possessing cellulosic cell wall. 7 + 1
9. Draw and describe the structure of a bacterial endospore. 8

GROUP – C

Answer any two questions : 15 × 2

10. Draw and describe life cycle of *Vaucheria*. Write a note on evolution of sex in algae. (3 + 5) + 7
11. Write notes on (any three) : 5 × 3
- (i) Heterocyst.
 - (ii) Salient features of Deuteromycotina.
 - (iii) Bacterial capsule.
 - (iv) Floral diagram.
 - (v) Rice tungro virus.

12. Write in detail about conjugation process of bacteria. Draw and describe ultrastructure of a bacterial flagella. 8 + 3 + 4
13. (a) Trace the trends of evolution of placentation.
- (b) What is the role of phytoalexins in plant defence? 8 + 7
-