

KALIGANJ GOVT. COLLEGE
PART I TEST EXAMINATION, 2016
Botany (Honours)
Paper I

Full marks: 75

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.

Answer all the questions

GROUP-A
(Algae-Marks: 25)

1. Answer any **three** of the following: 1×3=3
 - a. What are phycobilins?
 - b. Name the reserve food materials present in Rhodophyceae.
 - c. What is manubrium?
 - d. Mention two economic uses of algin.
 - e. Name one heterotrichous alga.
2. Answer any **three** of the following: 2×3=6
 - a. What is Gaidukov phenomenon?
 - b. What is diatomite? Mention its importance.
 - c. Write four salient features of Phaeophyceae.
 - d. What are epitheca and hypotheca?
 - e. What is Spermocarp?
3. Answer any **one** of the following: 6×1=6
 - a. Describe the mechanism of auxospore formation in Pennales.
 - b. Write a brief note on the origin of algae on the basis of Endosymbiotic theory.
4. Answer any **one** of the following: 10×1=10
 - a. Schematically represent the life-cycle of *Chara* with proper illustrations. Why *Chara* is called progenitor of land plants? 7+3
 - b. Describe the ultrastructure of a cyanophycean cell with proper diagram. Write a short note on the range of thallus structure of algae. 6+4

GROUP-B
(Fungi-Marks : 25)

5. Answer any **three** of the following: 1×3=3
 - a. What is sporangiospores?
 - b. What is papulospore?
 - c. What is sclerotia.
 - d. Do fungi act as decomposers? Cite examples.
 - e. What is chitin?

6. Answer any **three** of the following: 2×3=6
- State how Matigomycotina differ from Ascomycotina.
 - How does ectomycorrhiza differ from endomycorrhiza?
 - Name an endobiotic and disease causing fungus you have studied and mention the disease it causes.
 - Name one edible and one poisonous mushroom.
 - Differentiate between obligate parasite and facultative parasite.
7. Answer any **one** of the following: 1×6=6
- Define secondary homothallism with example. Discuss different types of heterothallism in fungi. 1+5=6
 - What is mycotoxin? Write a short note on Aflatoxin. 1+5=6
8. Answer any **one** of the following: 1×10=10
- Briefly describe the sequence of events of parasexual cycle in fungi. Describe sexual reproduction in heterothallic species of *Rhizopus*. 4+6=10
 - Draw and describe the fruiting body of *Agaricus*. With suitable labelled diagram describe the asexual reproduction of *Fusarium*. 4+6=10

GROUP-C
(Bryophyte-Marks: 25)

9. Answer any **three** of the following: 1×3=3
- Name a pollution indicator bryophyte.
 - What is 'bog' moss?
 - Why *Funaria* is called autoecious plant?
 - Name one bryophyte containing pyrenoids in their chloroplast.
10. Answer any **three** of the following: 2×3=6
- What is Antithetic theory?
 - Why bryophytes are called amphibians of plant kingdom?
 - Compare elaters and pseudoelaters.
 - What are peristome teeth? Mention its function.
 - Differentiate between rhizoids from scales.
11. Answer any **one** of the following: 6×1=6
- Describe the structure of sporophyte of *Anthoceros* with proper diagram.
 - Draw and describe the morphology and anatomy of gametophytic structure of *Sphagnum*.
12. Answer any **one** of the following: 10×1=10
- Discuss briefly the concept of evolution of sporophyte in bryophyte.
 - Describe the methods of vegetative reproduction in *Marchantia*. Write down the anatomical features of gametophytic structure of this genus with proper illustration. 5+5