

# Govt. General Degree College at Kaliganj

Test Examination  
2018  
Part-I Botany (Honours)

Full Marks = 75

Time = 4 hr.

Group-A

## Algae (Marks: 15)

1. Answer any one: 1x1
  - (i) What is manubrium?
  - (ii) Name alga producing caragenin.
2. Answer any two: 2x2
  - (i) Describe 'Gaidukov phenomenon'.
  - (ii) Name the most important reserve food of Phaeophyta and Rhodophyta.
  - (iii) Mention two affinities of Cyanobacteria with Rhodophyta.
3. Answer any one: 10x1
  - (i) Differentiate between auxospore formation in Centrales and Pennales.
  - (ii) Give structural detail of sex organs in *Chara*. Add a note on algal use as biofertilizer.

## Fungi (Marks: 15)

4. Answer any one: 1x1
  - (i) What is dikaryotic hypha?
  - (ii) Define eucarpic fungi.
5. Answer any two: 2x2
  - (i) What is zygospore?
  - (ii) What is 'fairy ring'?
  - (iii) What is sclerotia?
6. Answer any one: 10x1
  - (i) What are the different types of mycorrhizae? Mention the importance of mycorrhizae in agriculture and forestry. 6+4
  - (ii) Discuss structural features of basidiocarp in *Agaricus* with suitable sketches. Name an edible species of *Agaricus*. Add a note on food value of mushrooms. 7+1+2

## Bryophyta (Marks: 10)

7. Answer any one: 1x1
  - (i) What is calyptra?
  - (ii) Name an aquatic bryophyte.
8. Answer any two: 2x2
  - (i) What is peristome teeth? What is its function?
  - (ii) Why bryophytes are considered as amphibian plants?
  - (iii) Name a bryophyte which is used as fuel.
9. Answer any one: 5x1
  - (i) Discuss briefly the classification of bryophyte with special reference to Shaw and Goffinet(2000).
  - (ii) Describe structural features of *Anthoceros* sporophyte with its evolutionary importance.

Group-B

**Microbiology and Applied Microbiology (Marks: 25)**

1. Answer any three: 1x3

- (i) What is retro virus?cite one example.
- (ii) Name two cell inclusions found in bacterial cells.
- (iii) Define Generation time.
- (iv) State two functions of Slime layer.
- (v) What is F prime Plasmid?

2. Answer any three: 2x3

- (i) Mentio two important contribution of Louis Pasteur.
- (ii) Name the most important reserve food of Phaeophyta and Rhodophyta.
- (iii) Differentiate Archaea and Eubacteria with respect to Cell Wall and Cell Membrane.
- (iv) What is bioremediation?

3. Answer any one: 6x1

- (i) State the differences between Generalized and Specialised transduction.
- (ii) Give an illustrated account of physicochemical Structure of TMV.
- (iii) Mention the source and uses of the followings:  
(a) amylase; (b) Vinegar; (c) Lysine; (d) Dextran.

4. Answer any one: 10x1

- (i) Describe in detail the molecular mechanism of Lysogeny. Give a brief account of transmission of Plant viruses.
- (ii) Give a consize note on mechanism of Transformation. Describe the structure of Endospore. What is the function of RecA in Transformation.

**Plant Pathology (Marks: 10)**

5. Answer any one: 1x1

- (i) Name the pathogen responsible for Loose Smith of Wheat?
- (ii) What is epidemic disease?

6. Answer any two: 2x2

- (i) What do you mean by Inoculum?What is IP?
- (ii) Mention two modes of Penetration for pathogenic fungi.
- (iii) Mention two control measures for Black stem rust of wheat.

7. Answer any one: 5x1

- (i) Discuss the disease cycle of Late blight of Potato. Name the pathogen.
- (ii) Write a short note on roles of Phytoanticipins and Phytoalexins in Plant defence.