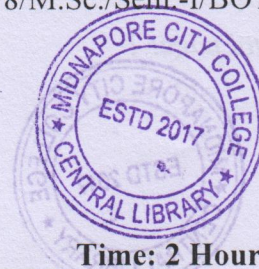


PG (NEW) CBCS
M.Sc. Semester-I Examination, 2018
BOTANY
 PAPER: BOT-103
 (MYCOLOGY & PLANT PATHOLOGY)



Full Marks: 40

Time: 2 Hours

Write the answer for each unit in separate sheet

UNIT I:

MYCOLOGY

1. Answer any two questions of the following: 2×2=4
- a) What is Spitzenkörper?
- b) What is Buller drop mechanism of basidiospore dispersal?
- c) Write two special characters of the division Myxomycota.
- d) What are 'Ascus' and 'Basidium'?
2. Answer any two questions from the following: 4×2=8
- a) Write down the role of fungi in agriculture and forestry.
- b) What are the unique features of fungi? Write the Features of fungi shared with bacteria. 2+2=4
- c) What is bioluminescent mushroom? Give an example. Briefly discuss about vesicle organization in fungi. 1+1+2=4
- d) What is clamp connection? Where is it found? 3+1=4
3. Answer any one question of the following: 8×1=8
- a) Discuss briefly the mechanism of basidiospore discharge in fungi. Mention the origin and structure of basidiospores? What is phytoalexin? 3+3+2=8
- b) Distinguish between homothallicism and heterothallicism? Discuss about the molecular biology of mating of fungi. Briefly write the 'signal transduction and mating response' in fungi. 2+4+2=8

UNIT II:

PLANT PATHOLOGY

4. Answer any two questions of the following: 2×2=4
- a) Define inoculum and inoculum potential.
- b) What do you mean by 'sign' and 'symptoms'?
- c) What is disease triangle?
- d) Name the causal organisms of 'Loose smut of wheat' and brown spot of rice'.
5. Answer any two from the following: 4×2=8
- a) Briefly discuss on the procedure of Nematode and Bacterial infection in plants. 2+2=4
- b) What do you mean by 'Disease cycle'? Write a concise note on crown gall disease. 2+2=4
- c) What is spread of inoculum? Briefly discuss the penetration of inoculum and infection of host. 2+2=4
- d) Discuss the disease cycle of black stem rust of wheat. Name the causal organism of this disease. 3+1=4
6. Answer any one question of the following: 8×1=8
- a) Define 'host' and 'parasite'. What do you mean by "host-parasite" interaction? Discuss the molecular biology of fungal host parasite interaction. 2+2+4=8
- b) Name one non infectious disease of plants. What is meant by SAR? Discuss the role of PR proteins in SAR. 1+1+6=8