

PARUL UNIVERSITY
FACULTY OF APPLIED SCIENCE
B.Sc., Summer 2017-18 Examination

Semester: 6
Subject Code: 11101351
Subject Name: Agricultural Microbiology

Date: 10/05/2018
Time: 02:00PM TO 04:30PM
Total Marks: 60

Instructions:

1. All questions are compulsory.
2. Figures to the right indicate full marks.
3. Make suitable assumptions wherever necessary.
4. Start new question on new page.

- Q.1. A) Essay type/ Brief note (4x2) (Each of 04 marks) (08)**
 (a) Briefly describe Nitrogen cycle.
 (b) Enlist the types of soil and explain the composition of soil and function in brief.
- Q.1. B) Answer the following questions (Any two)**
 (a) Short note/ Brief note (2x2)/ Schematically label the figures (2x2) (Each of 02 marks) (04)
 1. What is Humus?
 2. Draw carbon cycle.
 (b) Write a short note on Rhizosphere. (04)
 (c) Write a short note on degradation of cellulose, hemicellulose and lignin. (04)
- Q.2. A) Answer the following questions.**
 (a) Short note/ Brief note (2x2)/ Fill in the blanks. (Each of 02 marks) (04)
 1. What is Powdery mildew?
 2. Name the common methods of plant disease control.
 (b) Write a short note on Viral plant Disease. (04)
- Q.2. B) Answer the following questions (Any two)**
 (a) Short note/ Multiple choice questions. (Each of 01 marks) (03)
 1. Write any one difference between powdery mildew and downy mildew
 2. Enlist the types of wilt disease.
 3. Write any one symptom of canker.
 (b) Write a short note on rust. (03)
 (c) Write a short note on Biological pest control. (03)
- Q.3. A) Essay type/ Brief note (4x2) (Each of 04 marks) (08)**
 (a) Briefly describe the bioinoculants.
 (b) Write a brief description on Nitrogen Fixation.
- Q.3. B) Answer the following questions (Any two)**
 (a) Short note/ Brief note (2x2)/ Schematically label the figures (2x2) (Each of 02 marks) (04)
 1. Explain symbiotic nitrogen fixation.
 (b) Write a short note on phosphate solubilization. (04)
 (c) Write a short note on bioinoculants vs. chemical fertilizers. (04)
- Q.4. A) Answer the following questions.**
 (a) Short note/ Brief note (2x2)/ Fill in the blanks. (Each of 02 marks) (04)
 1. Write any one application of biogas.
 2. What is biogas?
 (b) Write a short note anaerobic digester. (04)
- Q.4. B) Answer the following questions (Any two)**
 (a) Short note/ Multiple choice questions. (Each of 01 marks) (03)
 1. What is biomethane?
 2. Define – methanogens
 3. Give one example of organism involve in anaerobic digestion.
 (b) Write a brief note on mechanism of biochemical gas production. (03)
 (c) Write a short note on cultivation of methanogens. (03)