

B.Sc. (Ag.) Honours Semester-I Examination, 2018

Course No: PPC-111 (Old)
(Agricultural Microbiology)

Signature of Centre Superintendent

Roll No. : (in figure) _____ (in words) _____

Student Index No. _____ Regn. No. _____ of _____

Time : Two Hours

Full marks : 40

Questions are of value as indicated in the margin

Part - I
(Objective and Short Answer Type)
(Use only ball point pen)

Time : 20 minutes

Full marks : 10

- Note:** 1. Answer in question paper itself.
2. Striking, rewriting or overwriting are not allowed in the objective type questions.

1. **State True (T) or False (F) in respect of the following statements(*any five*):** 0.5×5=2.5
- a) M. W. Beijerinck is called 'The father of virology'
- b) The storage food in fungi is glycogen
- c) Viroid was discovered by Doi et al.
- d) Amoeba is a prokaryote organism
- e) Discontinuous heating for sterilization is known as tindalization.
- f) Conjugation is a method of sexual reproduction in bacteria.
2. **Fill up the blanks with most appropriate words (*any four*):** 0.5×4=2.0
- a) Extra chromosomal DNA found in bacteria is known as _____.
- b) The full form of TMV is _____.
- c) Penicillin was discovered by _____.
- d) An asexual spore produced by fungi is _____.
- e) Name of one Gram (-)ve bacterium is _____.
3. **Tick (✓) the correct alternative (*any five*):** 0.5×5=2.5
- a) Agar solidifies at (25°C / 35°C / 45°C / 55°C).
- b) The term "Bacteriophage" was coined by (Felix d'Herelle / Robert Koch / M. W. Beijerinck).
- c) *Rhizobium* sp. fixes (N₂ / CO₂ / SO₂ / O₂) in soil.
- d) Prion was discovered by (E.F. Smith / Adolf Mayer / Prusiner / Tisdale).
- e) Virus was first crystallized by (Adolf Mayer / W. M. Stanley / E.C. Stakman / Iwanowski).
- f) Example of one fungal resting spore is (basidiospore / sporangiospore / conidia / chlamydospore).

P.T.O.

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4. Write briefly on the following (*any three*):

1.0×3=3.0

a) Mycorriza

b) Write names of two books on microbiology with authors.

c) Mycoplasma

d) Koch's postulates

e) Scope of microbiology

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Part - II

(Descriptive Type)

Time : 100 Minutes

Full marks : 30

Questions are of value as indicated in the margin

Answer *any four* questions.

5. Describe the morphology of bacteria on the basis of size, shape and arrangement of their cells. Classify bacteria on the basis of arrangement of their flagella with suitable examples. Draw labelled diagram of a typical bacterial cell. 3+2.5+2=7.5
 6. Define fungus. Write briefly about the asexual reproduction in fungi. 1+6.5=7.5
 7. Define virus. How it differs from viroid? Classify plant viruses on the basis of their nucleic acid and number of strand with suitable example. 1+2+4.5=7.5
 8. Write short notes on the following (*any three*): 2.5×3=7.5
 - a) Nitrogen cycle
 - b) Hyphal modification
 - c) Bacteriophage
 - d) Biofertilizer
 - e) Germ theory
 9. Write a brief history of microbiology. 7.5
 10. Write briefly about microbiology of water and food. 7.5
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