



KERALA AGRICULTURAL UNIVERSITY
B.Sc. (Hons.) Ag. 2016 Admission
III Semester Final Examination-February-2018

Micr.2101

Agricultural Microbiology (2+1)

Marks: 50
Time: 2 hours
(10x1=10)

I Match the Following

A

B

- | | | | |
|----|----------------|---|---|
| 1 | Nitrification | a | Heating to remove specific microorganisms |
| 2 | Rosy | b | Rhizobium |
| 3 | A. B. Frank | c | Crystal form of virus |
| 4 | Mechnikoff | d | Antibiotic |
| 5 | Virion | e | Buried slide technique |
| 6 | Carboxysomes | f | SCP |
| 7 | Pasteurization | g | Ammonia to nitrate |
| 8 | Waksman | h | Mycorrhiza |
| 9 | Beijerinck | i | Phagocyte theory of immunity |
| 10 | Chlorella | j | Carbon dioxide fixation |

II Write Short notes on ANY FIVE of the following

(5x2=10)

- 1 Conjugation
- 2 Plasmids
- 3 Biomethanation
- 4 Mycorrhiza
- 5 BNF
- 6 Antonie Van Leeuwenhoek
- 7 Mechanisms of nitrogenase enzyme protection.

III Answer ANY FIVE of the following

(5x4=20)

- 1 Explain the process of ammonification and nitrification in nitrogen cycle.
- 2 Write about various types of biofertilizers used in Agriculture.
- 3 Explain the importance of organic matter decomposition.
- 4 Explain the sulphur cycle with a diagram.
- 5 Describe the plant growth promotion by PGPR.
- 6 Explain the principles and methods of food preservation.
- 7 Explain the mechanisms of Phosphate solubilization.

IV Write an essay on ANY ONE of the following

(1x10=10)

- 1 Write about the history (growth) of soil microbiology in brief.
- 2 Write the structure of a bacterial cell, name the cell organelles and differentiate between prokaryotes and eukaryotes.
