

KERALA AGRICULTURAL UNIVERSITY
B.Sc (Hons.) Agriculture Programme – 2011 Admission
Ist Semester Final Examination – February / March 2012

Title : Micr 1101
Course : Agricultural Microbiology (2+1)

Marks : 80
Time : 3 Hours

I. Match the following **(10 x 1 = 10)**

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|-----------------------|----------------------------|
| 1. Continuous culture | A. SCP |
| 2. <i>Chlorella</i> | B. Bacterial Reproduction |
| 3. Endospore | C. Dipicolinic acid |
| 4. Pili | D. Sterilization |
| 5. Streptomycin | E. Turbidostat |
| 6. <i>Anabaena</i> | F. Hydrogen peroxide |
| 7. Autoclave | G. Endomycorrhiza |
| 8. Catalase test | H. S.A.Waksman |
| 9. <i>Glomus</i> | I. <i>Escherichia coil</i> |
| 10. EMB agar | J. Nitrogen fixer |

II. Write short notes on ANY TEN **(10 x 3 = 30)**

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|----------------------------------|----------------------------|
| 1. Louis Pasteur's contributions | 2. Phyllosphere microflora |
| 3. Plasmids | 4. Restriction enzymes |
| 5. DNA polymerase | 6. Eutrophication |
| 7. Frankia | 8. Methanogens |
| 9. Chemical preservatives | 10. Chemoautotroph |
| 11. Bacterial Flagella | 12. Prions |

III. Write short essay on ANY SIX of the following **(6 x 5 = 30)**

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|---------------------------------|----------------------------------|
| 1. Phosphorus cycle | 2. Food spoilage microorganisms |
| 3. Biogas production | 4. Bacterial staining techniques |
| 5. Biodegradable plastics | 6. Plant pathogens |
| 7. Biological nitrogen fixation | 8. Types of microscopes |

IV. Write essay on ANY ONE **(1 x 10 = 10)**

1. Write an essay on symbiotic microorganisms and their application in agriculture
2. Describe the structure and properties of bacteriophages and explain the lytic and lysogenic cycles with diagrams.