

KERALA AGRICULTURAL UNIVERSITY
B.Sc. (Hons.) Agriculture – 2009 Admission
1st Semester Final Examination - March 2010

Cat. No. : Micr 1101

Title : Agricultural Microbiology (2+1)

Max. marks: 80

Time : 3 hours

I. Fill up the blanks (1 to 5)/Define (6 to 10) (10 X 1= 10)

1. _____ is called as Father of Bacteriology
2. The unit measurement of a bacterial cell is _____
3. The most common pathway of glucose metabolism in microorganisms is _____
4. *Nitrosomonas* uses _____ as electron source
5. Biogas contains _____ % of methane
6. Phagocytosis
7. Plasmid
8. R:S ratio
9. Putrifaction
10. PGPR

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

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| <ol style="list-style-type: none">1. Vaccination2. Shapes of bacteria3. Nutritional types in bacteria4. ATP5. Bacteriophages6. Hfr cells | <ol style="list-style-type: none">7. Humus formation in soil8. Nitrification process9. Coliforms10. Pasteurization of milk11. <i>Bacillus thuringiensis</i>12. Biodegradable plastics |
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III. Write short essays on ANY SIX of the following (6 X 5 =30)

1. Spontaneous generation theory
2. Fermentative metabolism in bacteria
3. Lysogenic cycle of bacteriophages
4. Recombinant DNA technology
5. Composting process
6. Bacterial biofertilizers
7. Microbial spoilage of foods
8. Microbiology of methane production

IV. Write essays on ANY ONE (1 X 10 =10)

1. Draw neat diagram of prokaryotic and eukaryotic cells and differentiate their characteristic features
2. Discuss in detail the recycling of nitrogen nutrient in the biosphere with suitable diagram