

M.Sc. (Ag.) Examination, 2017

Semester – II

Plant Protection

Course - PPC-503

(Plant Bacteriology)

Time: Three Hours

Full Marks: 50

Questions are of value as indicated in the margin.

Answer **any five** questions

1. Define bacteria. Bacteria are sometimes referred as plants – justify the sentence. Describe the morphology of bacterial cell with a labelled diagram of the same. Name a stalked-bacterium showing asymmetrical binary fission. 1+2.5+5.5+1=10
 2. Define vector. Enumerate the association between insect vector and phytopathogenic bacteria in relation to survival and dispersal of the bacteria. Why do bacteria remain unstained in the negative staining procedure? 1+6+3=10
 3. Distinguish growth and diauxic growth of bacteria. Briefly described the measurement of bacterial growth. Write in brief about the factor affecting growth of bacteria. 2+3+5=10
 4. What do you mean by bdellovibrio? Write about the morphology and life cycle of bdellovibrio. Ddellovibrio may be used as a potential biocontrol agent – justify. 2+6+2=10
 5. Name the different methods of classification of bacteria. Described four different divisions of bacteria with suitable example given in Bergy's Manual of Systematic Bacteriology. Name one cyst and one conidia like structure forming bacteria. 3+5+2=10
 6. Differentiate phytoplasma and mycoplasma. Write briefly about the spiroplasma. Name ten different plant diseases caused by phytoplasma. 3+3+4=10
 7. Answer in short (**any two**) 5x2=10
 - a. Antony Van Leeuwenhoek
 - b. Robert Koch
 - c. Fastidious vascular bacteria
 - d. Flagellation in bacteria
 8. Write short notes on (**any four**) 2.5x4=10
 - a. Bacterial plasma membrane and its function
 - b. Antigen and antibody
 - c. Surface adherents of bacterial cell wall
 - d. Bacterial ribosomes
 - e. Bacterial conjugation
 - f. Outer membrane of bacteria and its function
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