

Code No: R050212305

Set No. 1

II B.Tech I Semester Supplementary Examinations, February 2008

MICROBIOLOGY

(Bio-Technology)

Time: 3 hours

Max Marks: 80

**Answer any FIVE Questions
All Questions carry equal marks**

1. Discuss the importance of microorganisms in food industry. [16]
2. Write about the molecular chronometers and signature sequences used in the classification of organisms. [16]
3. Give an account of viruses pathogenic to animals. [16]
4. Explain the entry of viruses into host cells. [16]
5. Define assay. Explain various types of viral assays. [16]
6. What are nutrients? Describe major nutritional types of microorganisms. [16]
7. Discuss the applications and limitations of various methods of preservation of microorganisms. [16]
8. What are the various chemical agents that are used for control of microorganisms growth. [16]

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Set No. 2

II B.Tech I Semester Supplementary Examinations, February 2008

MICROBIOLOGY

(Bio-Technology)

Time: 3 hours

Max Marks: 80

**Answer any FIVE Questions
All Questions carry equal marks**

1. Describe the contributions of the following people in the development of microbiology.
 - (a) John Tyndall
 - (b) Alexander Fleming
 - (c) John Needham
 - (d) Francisco Redi.

[4+4+4+4]
2. Describe different methods of classification of Bacteria. [16]
3. Mention the difference between animal and plant viruses. [16]
4. How does a bacteriophage introduce its nucleic acid into host cell. [16]
5. Define viruses and explain the viral morphology. [16]
6. Explain continuous culture of microorganisms. Describe how two different kinds of continuous culture systems, the chemostat and turbidostat operate. [16]
7. Explain the hierarchical arrangement of microorganisms in taxonomy. Explain the taxonomic ranks and names with an example of bacteria. [16]
8. What is radiation. Give the advantages and disadvantages of ultra violet light and ionizing radiation as sterilizing agents. Provide a few examples of how each is used for this purpose. [16]

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Set No. 3

II B.Tech I Semester Supplementary Examinations, February 2008

MICROBIOLOGY

(Bio-Technology)

Time: 3 hours

Max Marks: 80

**Answer any FIVE Questions
All Questions carry equal marks**

1. Write the contributions made by the following towards development of microbiology:
 - (a) Antony von Leuwenhoek
 - (b) Lazarro Spallanzani
 - (c) Joseph Lister. [6+5+5]
2. Describe the eucaryotic diversity with suitable examples. [16]
3. Give an account of viruses pathogenic to animals. [16]
4. Explain the replication pathways of a bacteriophage. [16]
5. Define viruses and explain the viral morphology. [16]
6. What are pure cultures and why they are important? How are spread plate, streak plate and pour plates prepared. [16]
7. Explain the influence of environmental factors on growth of microorganisms. [16]
8. Explain various methods to control microorganisms growth. [16]

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Set No. 4

II B.Tech I Semester Supplementary Examinations, February 2008

MICROBIOLOGY

(Bio-Technology)

Time: 3 hours

Max Marks: 80

**Answer any FIVE Questions
All Questions carry equal marks**

1. Write notes on:
 - (a) Fermentation
 - (b) Pure culture. [8+8]
2. How PCR technique is useful in classifying bacteria. [16]
3. Describe the structural properties of virus. [16]
4. Explain the replication pathways of a bacteriophage. [16]
5. Write short notes on:
 - (a) Hemagglutination assay
 - (b) Necrotic lesion
 - (c) Bacteriophage.
 - (d) DNA Viruses. [4+4+4+4]
6. What are nutrients and on what basis are they divided into macroelements and micronutrients or trace elements? Describe some ways in which macroelements and micronutrients are used by an organism. [16]
7. Write short notes on:
 - (a) Acid-fast staining.
 - (b) Flagellar staining.
 - (c) Spore staining.
 - (d) Differential staining. [4+4+4+4]
8. What are the various chemical agents that are used for control of microorganisms growth. [16]
