B. Tech.

(SEM. IV) EXAMINATION, 2006-07

BASIC & FOOD MICROBIOLOGY

Time : 2 Hours] [Total Marks : 50

Note : Attempt all questions.

1 Attempt any four parts of the following: 3.5x4=14
   (a) What are harmful and useful effects of microorganisms?
   (b) Describe the morphology of any mold with the help of diagram.
   (c) What is protoplasm?
   (d) Differentiate clearly between PROCARYOTIC and EUCARYOTIC cells.
   (e) How did the term “protists” arise?
   (f) Enumerate the conditions that may influence the effectiveness of any physical or chemical agent in control of microorganisms.

2 Attempt any three parts of the following : 4x3=12
   (a) How will you correlate microorganism with spoilage and preservation of foods?
   (b) How do you apply ‘ASEPSIS’ in preservation of foods?

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(c) What are the major causes of spoilage in foods? Explain clearly.

(d) Explain the following terms:
   (i) D-value
   (ii) z-value
   (iii) F-value.

(e) What are the sources of contamination in foods? Explain in brief.

3 Attempt any two parts of the following: $6 \times 2 = 12$

(a) Discuss hydrogen swell in canned foods.

(b) Indicate prescribed standards of microbial quality for:
   (i) Sugar in food preservation industry
   (ii) Carbonated beverages.

(c) Write technical note on “sources of contamination and spoilage bacteria in fresh meat”.

4 Attempt any two parts of the following: $6 \times 2 = 12$

(a) Discuss in brief the microbiology of fermentation of the following:
   (i) Apple cider
   (ii) Coffee beans
   (iii) Beer.

(b) Write a precise technical note on “HACCP in Food Industry”.

(c) How does food plant sanitation and hygiene relate with microorganisms? Explain clearly.