

B. PHARM.

(SEM. IV) EXAMINATION, 2006-07

PHARMACEUTICAL MICROBIOLOGY

Time : 3 Hours]

[Total Marks : 80

Note : (1) Answer all questions.

(2) All questions carry equal marks.

1 Answer any four : 4×4

- (a) Describe the structure of capsules in bacteria. What are their functions?
- (b) Discuss the general structure of a bacterial cell, with the help of a labelled diagram.
- (c) Give one method of classification of bacteria, giving examples.
- (d) Discuss the scope of industrial microbiology.
- (e) How is an endospore formed in bacteria? How does it differ from an exospore?

2 Answer any four : 4×4

- (a) Describe acid fast staining of bacteria.
- (b) Discuss the principle of Transmission Electron Microscope (TEM) with the help of a working diagram.
- (c) Discuss the cultivation of viruses using tissue culture technique.
- (d) Describe the conditions/methods for cultivation of anaerobic bacteria.

- (e) Classify the methods of isolation of bacteria and discuss any one of them.

3 Answer any four : 4×4

- (a) Describe the method A as test procedure in official tests for sterility.
- (b) Describe the bacteriological media and test-organisms used in official tests for sterility.
- (c) Discuss a method for selecting recombinant bacteria.
- (d) Discuss the production of monoclonal antibodies.
- (e) Define mutation. How do mutations occur in bacteria?

4 Answer any two : 8×2

- (a) Discuss the influence of the following factors on efficiency of a disinfectant:
 - (i) Concentration of disinfectant
 - (ii) TemperatureDiscuss the merits and demerits of phenol coefficient tests.
- (b) Discuss the principle, construction and working of a Wet-Heat sterilizer. What are its applications?
- (c) Classify disinfectants giving examples. Describe the characteristics of various types of bacteria-proof filter media, giving examples.

5 Write notes on any four : 4×4

- (a) Principle of microbiological assay of vitamins
- (b) Endotoxins
- (c) External Defense Mechanisms
- (d) Phagocytosis
- (e) Complement system