

UKA TARSADIA UNIVERSITY**Maliba Pharmacy College**B. Pharm 3rd Semester Internal Examination Nov 2012**030020302- Pharmaceutical Microbiology**

Time: 3 hrs

Date: 03/11/2012

Max. Marks: 70

Instructions:

- Question no. 1 is compulsory.
- From Q.2 to Q.7 attempt any **four** questions.
- Make suitable assumption whenever necessary.
- Figures to the right indicate full marks.

- Q.1** (a) Answer the following: (any six) **06**
- 1 Avidity
 - 2 Enrichment media
 - 3 Pure culture
 - 4 Active immunization
 - 5 Sanitization
 - 6 Resistance value
 - 7 Microbial load
 - 8 D-value
- (b) Describe in brief: (any four) **08**
- 1 Differentiate between prokaryotic and eukaryotic cells.
 - 2 How can cytoplasmic membrane be described as 'fluid mosaic model'?
 - 3 Differentiate between a pure culture and mixed culture.
 - 4 What are the reasons for using agar in solidified culture media?
 - 5 What is the difference between flagella and pili in terms of their morphological features and functions?
 - 6 Enlist the organs and cells involved in the immune system. Differentiate between B-cells and T-cells.
- Q.2** (a) Discuss the classification of disinfectants, mentioning their respective mechanism(s) of action. Give suitable examples for each class. **04**
- (b) What are the methods for sterility testing of pharmaceutical products as per I.P.? Write a note on Method A. How would you interpret the results of sterility testing? **05**
- (c) What do you understand by sterilization? Classify various methods of sterilization. Discuss moist heat sterilization. Enumerate its merit over dry heat sterilization. **05**
- Q.3** (a) Write a note on 'internal cell structures' of bacteria. **04**
- (b) Give the classification of bacteria on the basis of their nutritional types. Give suitable examples. **05**
- (c) Write a note on the shape of bacteria. Discuss the arrangement of bacterial cells in 'Cocci' and 'Bacilli' genera. **05**
- Q.4** (a) Write a note on virus. **04**
- (b) Describe the validation of an autoclave. **05**
- (c) Draw a bacterial cell showing all the typical structures. What are the differences between cell walls of Gram-positive and Gram-negative eubacteria? How does the cell wall composition of archaeobacteria differ from that of a eubacteria? **05**

- Q.5** (a) Write a note on fungi. 04
 (b) Giving suitable examples, enumerate various systems of classification of micro-organisms. Discuss the important features of five kingdom classification. 05
 (c) Describe the importance of micro-organisms in various areas of microbiology. 05
- Q. 6** (a) Write a note on Gram's staining. 04
 (b) Describe the techniques of isolating pure cultures. How are they preserved? 05
 (c) Describe the characteristics which are used to identify the micro-organisms. 05
- Q.7** (a) Give the classification of immunity. Differentiate between active and passive immunity. Give suitable examples, wherever necessary. 04
 (b) Give the structure of immunoglobulin. Discuss the classification of immunoglobulins. 05
 (c) Enlist the types of antigen-antibody reactions. Explain precipitation reaction. 05