



(Following Paper ID and Roll No. to be filled in your Answer Book)

PAPER ID : 150413

Roll No.

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B. Pharm.

(SEM. IV) THEORY EXAMINATION, 2014-15

PHARMACEUTICAL MICROBIOLOGY

Time : 3 Hours]

[Total Marks : 80

Note: Attempt all question. All question Carry equal marks.

1 Attempt **any four** of the following: **4×4=16**

- (a) What is scope of microbiology in the field of pharmaceuticals and in applied microbiology?
- (b) Give the taxonomical classification of microbes and general methods of classifying the bacteria.
- (c) Discuss the morphology of a bacteriophage.
- (d) Differentiate Gram-positive and Gram- negative bacteria.
- (e) Compare between bacteria and virus.

2 Attempt **any four** parts: **4×4=16**

- (a) Explain the mechanism of gram staining.
- (b) What is the importance of electron microscopy in microbiology?

- (c) Briefly explain the process of streaking.
- (d) What are the methods of isolation and maintenance of pure culture?
- (e) Explain the importance of microbial assay in microbiology.
- 3** Attempt **any four** parts: **4×4=16**
- (a) Write sterility procedure done for water for injection and ampoules.
- (b) Briefly explain procedure of sterilization in autoclave and draw the parts of an autoclave.
- (c) Define antiseptic and give detail about evaluation of antiseptic.
- (d) Give definition of thermal death time, decimal reduction time and inactivation factor.
- (e) What are the factors affecting disinfection?
- 4** Attempt **any two** parts: **8×2=16**
- (a) Briefly describe sterility testing and preservative efficacy.
- (b) Explain the methods for the test for sterility for ointments and creams and sterile devices.
- (c) How can microbial contamination be prevented by physical method?
- 5** Attempt **any two** parts: **8×2=16**
- (a) Explain microbiological assay of antibiotic and its precision.
- (b) Briefly explain about clean and aseptic area during manufacture of sterile product.
- (c) Give the mechanism of action of antimicrobial and methods to control hospital infection.