

**SIXTH SEMESTER B.Sc. DEGREE (SUPPLEMENTARY/IMPROVEMENT)  
EXAMINATION, MARCH/APRIL 2017****(UG—CCSS)****Biotechnology****BT 6E 01—MEDICAL MICROBIOLOGY****Time : Three Hours****Maximum : 30 Weightage****I. Objective type questions. Answer all questions :**

- 1 Streptococcus pneumonia was first isolated by ?
  - (a) Robert Koch.
  - (b) Edward Jenner.
  - (c) Antony von Leewenhoek.
  - (d) Louis Pasteur.
- 2 Mycoplasmas are bacterial cells that :
  - (a) Fail to reproduce on artificial media
  - (b) Have rigid cell walls.
  - (c) Are resistant to Penicillin.
  - (d) Stain well with Gram's stain.
- 3 All of the following are DNA viruses except :
  - (a) Parvo virus.
  - (b) Paramyxo virus.
  - (c) Herpes virus.
  - (d) Pox virus.
- 4 To differentiate lactose and non-lactose fermentors, the medium used is :
  - (a) Wilson and Lair.
  - (b) Blood agar.
  - (c) Tetra Thionate broth.
  - (d) Mac-Conkey's agar.
- 5 Mycotoxins are formed during the end of :
  - (a) Lag phase.
  - (b) Log phase.
  - (c) Stationary phase.
  - (d) Death phase.

**Turn over**

- 6 Example for live vaccine is:
- (a) Rubella & BCG.
  - (b) Polio & TAB.
  - (c) Diphtheria & Tetanus.
  - (d) Hepatitis A & Rabies.

Say True or False :

- 7 MacConkey broth is an example of anaerobic medium.
- 8 Multiple antibiotic resistance is mediated by plasmids.
- 9 The most common mode of cell division in bacteria is mitosis.
- 10 Rabies virus is a naked RNA virus.
- 11 In an antigen, haptens are non-immunogenic.
- 12 Killed, polio vaccine is Sabin vaccine.

(12 × ¼ = 3 weightage)

II. Short answer type questions. Write brief notes on all of the following:

- 13 What is endemy ?
- 14 Structure of lipopolysaccharide molecule.
- 15 Wet mounts for observing bacteria.
- 16 Importance of Gram staining.
- 17 Photoheterotrophs.
- 18 Differentiate between lytic and lysogenic phages.
- 19 Define the germ theory of disease.
- 20 What is immunization ?
- 21 What are the primary barriers that the human body has to protect from diseases ?

(9 × 1 = 9 weightage)

III. Short answer or paragraph questions. Answer any *five* questions.

- 22 What is the difference between prototrophs and auxotrophs ?
- 23 What is a pure culture ?
- 24 What is EMB agar media used for ?
- 25 What are the characteristics of coagulase + Staphylococci ?
- 26 What causes Salmonellosis?
- 27 What disease does Salmonella Typhi cause ? Discuss.
- 28 Name some of the diseases caused by Rickettsias.

(5 × 2 = 10 weightage)

IV. Essay questions. Answer any *two* questions.

- 29 Describe modes of transmission of microbes.
- 30 What are the consequences of "septic shock" ?
- 31 Describe differential staining techniques.

(2 × 4 = 8 weightage)