B. Pharm. (CBCS Pattern) Semester - III

BP303T - Pharmaceutical Microbiology

P. Pages : 3 **GUG/S/23/10886**

Time : Three Hours * 1 1 3 3 * Max. Marks : 75

Notes : 1. Assume suitable data wherever necessary.
2. Diagrams and Chemical equation should be given wherever necessary.
3. Illustrate your answers wherever necessary with the help of neat sketches.
4. All questions are compulsory.

1. Multiple Choice Questions (MCQs). **1x20 =20**

1) Antibiotics are produced by a large group of -------
   a) Bacteria b) Fungi
   c) Algae d) Actinomycetes

2) Bacteria are more sensitive to antibiotics at which phase of growth curve?
   a) Lag phase b) Log phase
   c) Stationary phase d) Decline phase

3) A binocular microscope has ------
   a) Two objective b) Two eyepieces
   c) Two condensers d) Two mirrors

4) Microorganisms in natural environments usually occurs as ------- culture.
   a) Bacterial b) Pure
   c) Mixed d) Fungal

5) One flagellum at one end of the bacterial cell is called ------
   a) Atrichate b) Amphitrichate
   c) Monotrichate d) Lophotrichate

6) Best method of sterilizing disposable syringes is -------
   a) Hot air oven b) UV rays
   c) Gamma rays d) Boiling in water

7) Viruses are best grown in --------
   a) Blood agar b) Enriched media
   c) Liquid media with serum d) Media with living cells

8) Incubation temperature range used for the growth of bacteria in a sterility test per IP is ------
   a) 20º - 25ºC b) 25 - 30ºC
   c) 30 - 35ºC d) 35 - 40ºC

9) Medical fungi mainly belong to -------
   a) Zygomycetes b) Ascomycetes
   c) Deuteromycetes d) Basidiomycetes

10) Which of the following organisms is acid fast?
a) M. tuberculosis b) E. Coli
c) B. Subtilis d) P. Aeruginosa

11) Staphylococcus aureus is used for IP assay of -------
a) Bleomycin b) Carbenicillin
c) Doxycycline d) Kanamycin

12) Efficiency of HEPA filter is --------- %
a) 99.97 b) 88.87
c) 90.97 d) 97.97

13) Glycerol may be used as a preservative upto a percentage of --------.
a) 15 b) 50
c) 10 d) 1

14) Birmuth sulphite medium is used for the growth of --------
a) Pseudomonas aeruginosa b) Salmonella typhi
c) Shigella dysenteriae d) Escherichia coli

15) --------- cells are pluripotent cells isolated from inner cells mass of early embryos.
a) Retroviral b) Blood
c) Embryonic stem d) Fibroblast

16) Phenol coefficient indicates ------- of a disinfectant.
a) Quantity b) Purity
c) Activity d) Efficiency

17) Dimorphism is characteristics of ----------
a) Bacteria b) Protozoa
c) Fungi d) Algae

18) Destruction or inhibition of micro – organisms in living tissues is known as --------
a) Disinfection b) Sterilization
c) Antisepsis d) Sanitisation

19) Peptone water and nutrient broth are -------
a) Enriched media b) Enrichment media
c) Basal media d) Differential media

20) Which of the following is a vapour phase disinfectant.
a) Formaldehyde b) Phenol
c) Isopropyl alcohol d) Iodine

2. Long answer questions solve **any two.** **2x10 =20**

1) Explain different methods used for isolation of culture.

2) Explain in detail about the importance of microbiological assays with special reference to antibiotics.

3) Explain in detail about size, shape and morphology of viruses.

3. Short answer questions solve **any seven.** **7x5 =35**

1) Write a different factor which affect disinfectant action.

2) Write in detail about the construction and design of clean room / aseptic room.

3) Explain different factors affecting microbial spoilage of pharmaceutical products.

4) Explain preservative efficacy?

5) Define ‘Microbiology’. Explain different applied branches of microbiology.

6) Explain in detail about the shape and arrangement of bacteria.

7) Explain in details growth curve of bacteria.

8) Write the principle and application of transmission electron microscopy.

9) Explain in short ‘Preservative Efficacy Test’.

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