

Seat No: _____

Enrollment No: _____

PARUL UNIVERSITY
FACULTY OF PHARMACY
B. Pharm. Winter 2021 - 22 Examination

Semester: 03

Subject Code: BP303T

Subject Name: Pharmaceutical Microbiology

Date: 08/10/2021

Time: 02:00 pm to 05:00 pm

Total Marks: 75

Instructions:

1. Figures to the right indicate maximum marks.
2. Make suitable assumptions wherever necessary.

Q.1 Multiple Choice Questions (MCQs) (1 Mark Each)

(20)

1. _____ have spiral shape.
a) Actinomycetes
b) Spirochetes
c) Rickettsiae
d) Virus
2. Which dye is used for negative staining?
a) Nigrosin
b) Crystal violet
c) Safranin
d) Methylene blue
3. What is organ of locomotion in bacteria?
a) flagella
b) pilli
c) spore
d) ribosome
4. Which method is used for sterilization of fixed oil?
a) Filtration
b) Dry Heat Sterilization
c) Moist Heat Sterilization
d) Chemical Sterilization
5. _____ gives image of surface morphology of microbial cell.
a) Scanning Electron Microscope
b) Transmission Electron Microscope
c) Phase Contrast Microscope
d) Dark Field Microscope
6. Gram Negative bacteria have _____.
a) high amount of peptidoglycan in their cell wall
b) high amount of lipids in their cell wall
c) low amount of peptidoglycan in their cell wall
d) None of these
7. _____ is example of acid fast bacteria.
a) Bacillus subtilis
b) Escherichia coli
c) Mycobacterium tuberculosis
d) Staphylococcus Aureus
8. _____ is defined as Time in minutes at any defined temperature to destroy 90% viable microorganism.
a) Z value
b) D value
c) F value
d) Q₁₀ value
9. Which of the following is not used for preservation of biomolecular?
a) Autoclaving
b) Cryopreservation
c) Vacuum foam drying
d) Lyophilization
10. Which of the following is ionizing radiation?
a) UV radiation
b) Gamma radiation
c) Both of them
d) None of them
11. The role of agar in nutrient agar media is _____.
a) solidifying agent
b) source of energy
c) preservative
d) all of above
12. Mesosomes are part of _____.
a) plasma membrane
b) lysosome
c) golgi apparatus
d) all of above

13. Which of the following are evaluation test for disinfectant?
 a) Chick martin test
 b) Riedel walker test
 c) AOAC test
 d) All of above
14. Which of the following is antimicrobial preservative?
 a) Magnesium Carbonate
 b) Sodium starch glycolate
 c) Benzoic acid
 d) BHT
15. Which biochemical test is used to identify Gram negative bacteria?
 a) IMViC test
 b) Catalase test
 c) Oxidase test
 d) Urease test
16. Which of the following is used for adhesion in bacteria?
 a) pilli
 b) flagella
 c) cell wall
 d) nucleus
17. Pasteurization is example of _____.
 a) Dry Heat sterilization
 b) Moist Heat sterilization
 c) Cold sterilization
 d) filtration
18. Which is the test organism for Kanamycin assay according to I.P.?
 a) Bacillus subtilis
 b) Bacillus pumilus
 c) Staphylococcus epidermis
 d) None of above
19. Total count means _____.
 a) Number of dead cells present in the sample.
 b) Number of dead and live cells present in the sample.
 c) Number of live cells present in the sample.
 d) All of above.
20. DOP Test is used to assess _____.
 a) efficacy of disinfectant
 b) effectiveness of antibiotic
 c) Particle count in the sample.
 d) Integrity of HEPA filter.

Q.2 Long Answers (any 2 out of 3) (10 Marks Each) (20)

1. Write a note on Autoclave and discuss sterility indicators.
2. Discuss Sterility testing of pharmaceuticals in detail.
3. Explain types of bacteria based on their oxygen, temperature and nutritional requirements.

Q.3 Short Answers (any 7 out of 9) (5 Marks Each) (35)

1. Discuss methods for isolation of pure culture.
2. Explain preservation of pharmaceutical products using antimicrobial agents and discuss evaluation of microbial stability of formulation.
3. Discuss scope and importance of Microbiology in field of Pharmacy.
4. Discuss animal cell culture along with its utility in pharmaceutical industry and research.
5. Explain Microbial assay of antibiotics.
6. Discuss designing of aseptic area in detail.
7. Explain principle of Monochrome staining and Gram staining in detail.
8. Discuss clean area classification.
9. What is bacteriophage? Explain Lytic cycle.