**B.Pharm 3rd Semester Examination**

**Subject- Pharmaceutical Microbiology (BP303T)**

 **Full Marks:- 75 Time:-3 hours**

 **Multiple type questions (Answer all) (10 X 2) = 20**

1. Enzymes responsible for alcoholic fermentation:
	1. Ketolase b. Zymase c. Peroxidase d. Oxidase
2. Father of microbiology is:
	1. Louis Pasteur b. Lister c. A.V. Leeuwenhock d. Robert Koch
3. The antiseptic method was first demonstrated by:
	1. Lwanowski b. Lord Lister c. Edward Jenner d. Beijerinck
4. 7. Small pox vaccine was first discovered by:
	1. Robert Koch b. Louis Pasteur c. Lister d. Edward Jenner
5. The term mutation was coined by:
	1. Pasteur b. Darwin c. Hugo devries d. Lamark
6. Compound microscope was discovered by:
	1. Antony von b. Pasteur c. Johnsen & Hans d. None of these
7. Father of Medical Microbiology is:
	1. Pasteur b. Jenner c. Koch d. A.L.Hock
8. Disease that affects many people at different countries is termed as:
	1. Sporadic b. Pandemic c. Epidemic d. Endemic
9. Meosomes are also known as:
	1. Mitochondria b. Endoplasmic reticulum c. Plasmids d. Chondroids
10. Hybridoma technique was first discovered by:

a. Kohler and Milstein b. Robert Koch c. ‘D’ Herelle d. Land Steiner

**Long Questions (Answer any two) ( 2 X 10) = 20**

1. State the significance and scope of Microbiology in pharmaceutical industry?
2. What are the staining technique to identify bacteria and the principles , applications of physical, chemical, and mechanical method of sterilization?
3. What are the morphology, classification, reproduction and cultivation of fungi and virus?
4. Write the factors influencing disinfection, antiseptics & their evaluation for bacteriostatic and bactericidal action?

 **Short Questions (Answer any seven) ( 7 X 5 ) = 35**

1. Specify the different sources of contamination in an aseptic area and methods of prevention?
2. Write the evaluation process of bactericidal and sterility testing products associated?
3. Write the Principles of laminar air flow and their uses in Pharmaceutical industry?
4. What are the Principles and methods of different microbiological assay?
5. What are the methods for standardization of antibiotics & vitamins?
6. What are the validation process in preservation nof pharmaceutical products using antimicrobial agents?
7. What are the general procedures of cell culture and differentiate them according to their functions?
8. Application of cell culture in pharmaceutical industry and research?