Date 28/12/2020

Oriental College of Pharmacy
Microbiology Practical Questions(Viva-Voce)

1. What is sterilization? Classify different methods of sterilization?
2. What are various techniques used for isolation of pure culture? Explain poured plate method?
3. Explain principle and procedure of determination of amylase activity ?
4. Name the parts and their function of compound microscope?
5. Explain principle and procedure of determination of gelatinase activity?
6. Explain the difference between Extracellular and Intracellular enzymes of Micro-organism?
7. What are sources of contamination in aseptic area?
8. Explain the Laminar Air Flow system?
9. Explain principle and procedure of acid fast staining?
10. Explain principle and procedure of negative staining?
11. Explain principle and procedure of sterility test of creams?
12. What is the principle of the autoclave?
13. How will you sterilize the following.
    a) Culture media
    b) Fixed Oil
    c) Aseptic room
    d) Solutions
    e) Powders
    f) Petri plate
14. Write the advantages and disadvantages of hot air oven.
15. Which filter is used for separation of bacteria and why?
16. Name different methods of sterilization.
17. How are the thermolabile substances sterilized?
18. How do you test the efficiency of autoclave and hot air oven?
19. What do you mean by aseptic technique?
20. What is the use of refrigerator and incubator?

21. Differentiate between incubator and hot air oven.
22. What is DOP test?
23. What precautions are required for handling autoclaves?
24. What are the advantages of oil immersion lens?
25. What are the different types of microscope?
26. How will you calculate total magnification of a compound microscope?
27. Why is cedar wood oil added on slide under oil immersion objective?
28. How will you take care of a compound microscope?
29. What are the different applications of autoclave?
30. Explain the use and care of centrifuge.
31. Write the advantages and disadvantages of the membrane filter.
32. Write the applications of following.
    a) Zone reader
    b) Membrance filter
    c) HEPA filter
    d) Colony counter
    e) Anaerobic jar
33. Why are basic dyes more effective for bacterial staining than acidic dyes?
34. Define 'stain' and classify the stain.
35. Why are only basic dyes used for the simple staining?
36. Describe the mechanism of staining of bacteria with methylene blue.
37. Differentiate between stain and dye.
38. List the advantages of negative staining technique.
39. What is the basic difference between the negative and positive staining technique?
40. Why is staining of bacteria required? Classify different staining methods.
41. What is the principle of Gram's staining?
42. What is mordant?
43. Can Gram-positive organism look as Gram-negative organism?
44. Name Gram-positive and Gram-negative cocci.
45. Differentiate between Gram-positive bacteria and Gram-negative bacteria.
46. What is differential staining? Write advantages.
47. List acid-fast organisms.
48. Explain the principle of spore staining.
49. Write the principle of cell-wall staining.
50. What are the applications of hanging drop technique?

51. Explain different parts of flagella.
52. What is the chemical composition of capsule?
53. Mention the methods of spore staining.
54. Why heating is necessary in acid fast staining?
55. Explain any one method of flagella staining.
56. Write the composition of nutrient broth.
57. Write the use of each ingredient in nutrient broth.
58. What is the use of agar? Write the different properties of agar.
59. Can you use gelatin as solidifying agent? Write its properties.
60. List different types of media.
61. Write the purpose of the subculturing the culture.
62. Which medium is used for cultivation of fungi?
63. List the different methods for isolation of microorganisms.
64. Write the advantages and the disadvantages of streak plate method.
65. Write the advantages and the disadvantages of pour plate technique.
66. What is mean by the pure culture?
67. Write principle of pour plate technique.
68. Explain the physical requirements for the growth of microorganisms.
69. List some aerobic and anaerobic microorganisms.