ST. JOSEPH'S COLLEGE OF ARTS & SCIENCE (AUTONOMOUS)

CUDDALORE – 607001

PG & RESEARCH DEPARTMENT OF BIOCHEMISTRY

SUBJECT: MEDICAL LABORATORY TECHNOLOGY

SUB CODE: EBC614B

CLASS: III B.Sc Biochemistry

STAFF INCHARGE: Mrs. Celin Hilda Mary & Dr. R.Ramakrishnan

SECTION-A

I. ANSWER IN ONE SENTENCE

1. Name any two fixating agents and the mode of operation.
2. Give the role of fixating agents in staining.
3. Define molarity.
4. Write the use of antiD antibody.
5. Differentiate plasma and serum.
6. What anticoagulants?
7. Define preservatives. Name the preservative used for 24 hrs urine collection.
8. Define histopathology.
9. Expand the term CSF.
10. How will you detect the presence of sugar in urine?
11. Name the test used for detection of bile pigments.
12. What are bile salts?
13. Expand the term SGPT and SGOT.
14. What is antigen?
15. Name the antigens present on RBCs for blood groupings.
16. What is occult blood?
17. What is the normal level of uric acid in serum?
18. What is mean by packed cell volume?
19. Expand the term TPHA.
20. Name the vitamin responsible for clotting of blood.

SECTION-B

II. ANSWER THE FOLLOWING

21. Discuss the role and responsibilities of laboratory technician.
22. Explain the in the collection of biological sample blood and urine.
23. Explain the function and clinical significance of LDH.
24. Write the working principle of gram staining and differentiate the gram positive and negative.
25. Differentiate gram positive and gram negative bacteria with example.
26. List the abnormal constituents present in urine sample.
27. How will you find and conclude the presence of TB causative organisms present in the sample?
28. Give an account of SGPT.
29. Discuss the detection of haematocrit vale.
30. Expand the term ELISA and about their role in detecting HIV.
31. Brief the importance of microbial culture.
32. Predict the reason for increased and decreased phosphate levels in serum.
33. Write the clinical significance of acid phosphatase.
34. Explain the clinical significance of alkaline phosphatase.
35. Expand the term SGOT. Give its clinical significance.
36. What is hyperglycaemia? Write the detection method and abnormal status of blood glucose.
37. Discuss the role of serum albumin.
38. Give the principle involved in tissue staining based on fat.
39. Write a note on haematocrit value.
40. Explain the role of proteins in tissue staining.
41. What is microtome? Brief its role in hiotopathology.
42. Discuss the importance of ESR.
43. Write the collection of CSF.
44. Give an account on bleeding time.
45. What is clotting time? Write its clinical significance.
46. Discuss about the detection method of blood groupings.
47. Highlight the points followed in calibration of instruments.

SECTION – C

III. ANSWER THE FOLLOWING

48. Discuss the safety aspects followed in microbiological techniques.
49. Explain the physiological functions of sodium and potassium.
50. Discuss the blood calcium homeostasis.
51. Write the preparation of 100ml of 0.1N sodium hydroxide in laboratory.
52. What is normal level of plasma proteins? Give the reason for the abnormal conditions.
53. Discuss the physiological status of increased blood uric acid.
54. Discuss the enumeration of RBC and mention their abnormal conditions.
55. List out the laboratory equipments and their role in handling the biological samples.
56. What is the normal level of blood urea? Mention the significance of urea in clinical findings.
57. Brief the role of carbohydrates and proteins in tissue staining.
58. Explain in detail about the tissue staining with example.
59. Write the procedure followed estimation of haemoglobin.
60. Discuss the enumeration of WBC and mention their abnormal conditions.
61. Write the different steps involved in the preparation of blood smear.
62. What are universal donors and universal acceptors? Explain with cross matching diagram.
63. Give an account on erythroblastosis foetolysis.