

**SRI DEVARAJ URS ACADEMY OF HIGHER EDUCATION & RESEARCH**

**(A DEEMED TO BE UNIVERSITY)**



**B.Sc. Allied Health Sciences Third Year Semester-VI**

**April 2023 Examination**

**B.Sc. Medical Laboratory Technology**

**Time : 2.30 Hrs.**

**Paper-I**

**[ Max. Marks : 80]**

**Subject: Applied aspects of Biochemistry**

**Q.P Code : J6060**

*Your answers should be specific to the questions asked.*

*Draw neat labeled diagrams wherever necessary.*

**LONG ESSAY**

**2 X 10 = 20 Marks**

1. Describe in detail principle, types, procedure & application of ELISA
2. Define Mean, Median, Mode, Standard Deviation (SD) & Coefficient of variation (% CV).  
Calculate Mean, Median, Mode, Standard Deviation (SD) & Coefficient of variation (% CV) for the given set of numbers  
19,23, 16, 21, 27,24,20, 16, 28

**SHORT ESSAY (Answer any six)**

**6 X 5 = 30 Marks**

3. Describe the similarities, advantage, disadvantage between the colorimeter & spectrophotometer.
4. Describe different methods of analysis of total proteins.
5. Define quality control and Explain different types of quality control.
6. Radio Immuno assay(RIA)- Principle, application & disadvantage.
7. Describe different electrophoresis bands of separation of lipoproteins.
8. Define clearance test. List the various clearance test and explain any one clearance test.
9. Define Lipoproteins & classify Lipoproteins with their functions.
10. Define the Mean, Median, Standard Deviation (SD), %CV & Total Allowable Error (TAE)

**SHORT ANSWERS (Answer any ten)**

**10 X 3 = 30 Marks**

- 11 List any 3 devices used in POCT.
- 12 Write three Applications of ELISA.
- 13 Write the principle of paper chromatography.
- 14 List any two methods of protein purification.
- 15 Write the reference range for (1) Albumin (2) Globulin (3) A:G Ratio
- 16 Define sensitivity and specificity
- 17 Write the principle of Vandenberg reaction.
- 18 Biochemical changes in hypothyroidism.
- 19 What is Urea clearance test? Write its significance.
- 20 Define Accuracy & Precision.
- 21 What is Total allowable error?
- 22 Name the 3 Ketone bodies.

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**B.Sc. Allied Health Sciences Third Year Semester-VI**

Examination

**B.Sc. Medical Laboratory Technology**

Paper-II

[ Max. Marks : 80]

Time : 2.30 Hrs.

**Subject: Applied aspects of Microbiology**

**Q.P Code : J6070**

*Your answers should be specific to the questions asked.*

*Draw neat labeled diagrams wherever necessary.*

**LONG ESSAY**

**2 X 10 = 20 Marks**

1. Define sterilization. Classify the sterilization methods and discuss in detail about Autoclave (2+4+4)
2. List the causes and common organisms causing urinary tract infection (UTI) and their laboratory diagnosis.(3+2+5)

**SHORT ESSAY (Answer any six)**

**6 X 5 = 30 Marks**

3. Blood spill management.
4. Culture media – Classification with examples
5. Laboratory diagnosis of Malaria
6. PCR and its application
7. Agglutination - Principle with examples
8. Cold sterilization
9. ELISA – Principle and applications
10. Laboratory diagnosis of Tuberculosis.

**SHORT ANSWERS (Answer any ten)**

**10 X 3 = 30 Marks**

11. Draw a labelled diagram of ova of *Trichuris trichura*
12. Mention 3 Rapid card tests
13. Name 3 gram negative bacilli.
14. Name 3 anaerobic organisms.
15. Name 3 organisms causing skin and soft tissue infections
16. Name 2 acid fast bacilli.
17. Name 3 modes of transmission of HIV
18. Define selective media with examples
19. Name any three standard precautions
20. Name 4 water borne pathogens.
21. Five moments of hand hygiene.
22. Safe injection Practices.



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**B.Sc. Allied Health Sciences Third Year Semester-VI**

April 2023 Examination

**B.Sc. Medical Laboratory Technology**

Time : 2.30 Hrs.

Paper-III

[ Max. Marks : 80]

**Subject: Applied aspects of Pathology**

**Q.P Code : J6080**

*Your answers should be specific to the questions asked.*

*Draw neat labeled diagrams wherever necessary.*

**LONG ESSAY**

**2 X 10 = 20 Marks**

1. Mention the source of cerebrospinal fluid (CSF) sample, indications and contraindications of Lumbar puncture. Discuss the CSF changes in various types of meningitis.
2. Define Hypersensitivity reactions. Describe different types of hypersensitivity reactions with examples

**SHORT ESSAY (Answer any six)**

**6 X 5 = 30 Marks**

3. Cytology of pleural effusion in benign and malignant conditions
4. Define biomedical waste management. Discuss their safe management of it.
5. Describe the principle, procedure and interpretation of ZN stain.
6. Describe Coomb's test.
7. Describe transfusion reactions
8. Define benzidine test. Describe the procedure.
9. Describe microscopy of urinary sediment. Write a note on urinary casts
10. Describe pathogenesis of type 1 diabetes mellitus.

**SHORT ANSWERS (Answer any ten)**

**10 X 3 = 30 Marks**

11. What are crystals? Name the conditions associated with urinary crystals
12. Mention three reagents present in urine strip.
13. Mention three antigen antibody mediated diseases.
14. What is Autoimmune disease.
15. List three differences between transudate and exudates
16. Mention three renal function tests.
17. Name the antibodies present in thyroiditis.
18. Name the method for pregnancy test.
19. Name 3 colour coding for biomedical waste management.
20. Name 3 different modes of urine sample collections
21. What is serum sickness.
22. Name the parts of Antigen.