SRI DEVARAJ URS ACADEMY OF HIGHER EDUCATION & RESEARCH

(A DEEMED TO BE UNIVERSITY)

B.Sc. Allied Health Sciences Third Year (Semester-VI)

October -2018 Examination

B.Sc. Medical Laboratory Technology (MLT)

Time: 2.30 Hrs. [Max. Marks: 80]

BIOCHEMISTRY

Q.P Code: AHS-105

Your answers should be specific to the questions asked. Draw neat labelled diagrams wherever necessary.

LONG ESSAY

2 X 10 = 20 Marks

- 1. Explain the steps of activation, initiation, elongation and termination of protein Biosynthesis.
- 2. What is chromatography? Describe the principle, procedure and applications of high pressure liquid chromatography.

SHORT ESSAY (Answer any Six)

 $6 \times 5 = 30 \text{ Marks}$

- 3. What is replication? Describe the steps of replication.
- 4. Describe the role of kidneys in the maintenance of acid base balance.
- 5. Thyroid profile.
- 6. Enzymes that help to assess liver function.
- 7. Principle and technique of colorimetry.
- 8. ELISA.
- 9. Mass spectrometry.
- 10. Laboratory diagnosis of myocardial infarction.

SHORT ANSWERS (Answer any Ten)

10 X 3 = 30 Marks

- 11. Therapeutic drug monitoring.
- 12. Reverse transcriptase.
- 13. Proteomics.
- 14. Define radioactivity. Name the uses of a) I¹³¹ b) Co⁶⁰.
- 15. Write the differences between standard error of mean and standard deviation.
- 16. Glycated hemoglobin.
- 17. Biochemical profile in pancreatic function.
- 18. Principle of electrophoresis.
- 19. Principle of flame photometry.
- 20. Bone profile.
- 21. LH and FSH.
- 22. Write normal levels and clinical significance of serum and urinary creatinine.

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MICROBIOLOGY

Q.P Code: AHS-109

Your answers should be specific to the questions asked. Draw neat labelled diagrams wherever necessary.

 $\underline{LONG ESSAY} \qquad \qquad 2 \times 10 = 20 \text{ Marks}$

- 1. Enumerate the opportunistic fungi. Discuss the pathogenesis and lab diagnosis of cryptococcal meningitis.
- 2. Discuss the pathogenesis and laboratory diagnosis of rabies virus infection.

SHORT ESSAY (Answer any Six)

 $6 \times 5 = 30 \text{ Marks}$

- 3. Cell cultures in cultivation of virus.
- 4. Infections caused by herper simplex virus.
- 5. Hepatitis E virus.
- 6. Chromoblastomycosis.
- 7. Explain slide culture technique.
- 8. Laboratory diagnosis of dermatophytoses.
- 9. Describe pathogenesis and lat diagnosis of chikungunya virus infection.
- 10. Laboratory diagnosis of HIV infection.

SHORT ANSWERS (Answer any Ten)

10 X 3 = 30 Marks

- 11. Hepatitis B virus vaccine.
- 12. Enumerate three infections caused by Aspergillus.
- 13. Draw a neat diagram of Rhizopus.
- 14. Pitryiasis versicolor.
- 15. Otomycosis.
- 16. Candida albicans.
- 17. List three diarrhoea causing viruses.
- 18. List three dimorphic fungi.
- 19. Inclusion bodies-definition, types and uses.
- 20. Lactophenol cotton blue stain.
- 21. Mycotoxicosis.
- 22. Difference between yeast and mould form of fungi.

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Time: 2.30 Hrs. [Max. Marks: 80]

PATHOLOGY

Q.P Code: AHS-107

Your answers should be specific to the questions asked. Draw neat labelled diagrams wherever necessary.

LONG ESSAY

 $2 \times 10 = 20 \text{ Marks}$

- 1. What is Karyotyping? Discuss various methods of Karyotypic analysis.
- 2. What are the steps involved in Phlebotomy? Mention the adverse donor reactions.

SHORT ESSAY (Answer any Six)

 $6 \times 5 = 30 \text{ Marks}$

- 3. Briefly describe sample preparation for flow cytometry.
- 4. List the Cytologic features of malignant smears on FNAC.
- 5. Coomb's test.
- 6. Briefly discuss the fixation and staining procedures for routine cytology specimens.
- 7. List the advantages of blood components over whole blood.
- 8. Briefly describe plating, subculturing and derivation of cell lines in tissue culture.
- 9. Discuss the steps involved in antigen retrieval for immunocytochemistry. List the precautions to be taken to avoid artefacts during staining.
- 10. Discuss in detail cross matching.

SHORT ANSWERS (Answer any Ten)

10 X 3 = 30 Marks

- 11. How should platelets be preserved? What is its shelf life.
- 12. In the given example "Xq21.3". what does each Alphabet/Numbers stand for?
- 13. Name three uses of image analysis.
- 14. Bombay Blood Group.
- 15. List the parts of laminar air flow equipment.
- 16. List the media in which immortalized cell lines can be preserved.
- 17. Describe the normal histology of thyroid gland.
- 18. Define primary and secondary antibody in immunohistochemistry.
- 19. What are Oncogenes? Give two examples.
- 20. List the different chromosomal banding techniques.
- 21. Name three anticoagulants used in blood banking.
- 22. List the precautions to prevent transfusion transmitted infections in blood banking.