SRI DEVARAJ URS ACADEMY OF HIGHER EDUCATION & RESEARCH

(A DEEMED TO BE UNIVERSITY)

B.Sc. Allied Health Sciences Second Year (Semester-IV)

August-2016 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. Describe the steps of urea cycle. Add a note on its regulation and disorders.
2. Write about the chemistry, sources, RDA, Biochemical functions and deficiency manifestation of vitamin D.

SHORT ESSAY (Answer any Six) **6 X 5 = 30 Marks**

3. Name the ketone bodies. Describe the synthesis of ketone bodies and add a note on its clinical significance.
4. Define and classify enzymes with an example for each class.
5. Describe "WALD's visual "cycle" add a note on deficiency manifestations of vitamin A.
6. Define and classify lipoproteins and add a note on its functions.
7. Describe glucose-Alanine cycle and add a note on its significance.
8. Write the steps of B- Oxidation of fatty acids. Add a note on energetics of palmitic acid oxidation.
9. Clearance tests.
10. Gout.

SHORT ANSWERS (Answer any Ten) **10 X 3 = 30 Marks**

11. Write any three functions of vitamin C.
12. Write the coenzyme forms of
    i. Thiamine ii. Pyridoxine iii. Riboflavin
13. Mention the causes and prevention of fatty liver.
14. Atherosclerosis.
15. Name any three compounds derived from cholesterol.
16. Key enzymes of gluconeogesis.
17. Rothera's test.
18. Add a note on enzyme defect, clinical features and treatment phenyl ketonuria.
19. Define isoenzymes. Give two examples with biomedical importance.
20. Beer's law.
21. Add a note on significance of petose phosphate pathway.
22. Define GTT? Add a note on indications, to perform GTT test.

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MICROBIOLOGY

Q.P. Code : AHS-109

Your answers should be specific to the questions asked.
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LONG ESSAY **2 X 10 = 20 Marks**

1. Discuss the predisposing factors, pathogenesis and clinical features of Escherichia coli. Write a note on the laboratory diagnosis of urinary tract infection.
2. Classify spirochetes. Write about the morphology and pathogenesis of Treponema pallidum. Discuss the laboratory diagnosis of syphilis.

SHORT ESSAY (Answer any Six) **6 X 5 = 30 Marks**

3. Lobar pneumonia.
4. Halophilic vibrios.
5. Oxidase test.
6. Weil's disease.
7. Pseudomanas aeruginosa.
8. Enteric isolation media.
9. IMVIC reactions.
10. Shigellosis.

SHORT ANSWERS (Answer any Ten) **10 X 3 = 30 Marks**

11. Hard chancre.
12. Tests to demonstrate motility.
13. Enumerate specific tests for syphilis.
14. Antibiotic susceptibility test.
15. Diseases caused by pseudomonas aeruginosa.
16. Castaneda's method of culture.
17. Factors inhibiting swarming.
18. Antigens of salmonella.
19. Name four species of klebsiella.
20. Gram negative nonfermenters.
21. Characteristics of Proteus species.
22. Transport media in vibrio cholera.

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PATHOLOGY

Q.P Code : AHS-107

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

LONG ESSAY **2 X 10 = 20 Marks**

1. Name four pigments/precipitates commonly encountered in histopathology lab. Discuss procedure for the remove of any two pigments/precipitates in detail.
2. Discuss in detail the different classes of microtomes. Add a note on knives used in microtomes.

SHORT ESSAY (Answer any Six) **6 X 5 = 30 Marks**

3. Electron microcopy – uses and principle write a note on knives used in electron microscopy.
4. List the steps involved in routine hematoxylin and eosin (H&E) straining. Add a brief note on automatic slide stainer.
5. Write the principle of cryostat. List the advantages and disadvantages of cryostat.
6. Discuss honing and stropping of metal microtome knives.
7. Briefly describe mounting of museum specimens in general.
8. Discuss the factors affecting tissue processing.
9. List the steps in reticulin staining and describe each step briefly.
10. What is embedding? Discuss the technique of embedding.

SHORT ANSWERS (Answer any Ten) **10 X 3 = 30 Marks**

11. What is fixation? Name two fixatives.
12. Describe the test for potency of schiff's leuco-fushcin solution.
13. List the resultant colors obtained on van gieson's stain.
14. List six pas (periodic acid-schiff) positive substances.
15. What is blueing? Name two blueing agents.
16. Name three autofluorescent tissues.
17. List three uses of computers in pathology.
18. Name three clearing agents.
19. List advantages of automatic tissue processors.
20. What is serial sections? Name an indication for serial sectioning.
21. What is filing of slides?
22. Name three agents used for ripening of hematoxylin.

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