

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

October-2015 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. What are enzymes? Classify enzymes with an example for each class.
2. Describe in detail the citric acid cycle and the energy produced. Explain the amphibolic and anaplerotic role of the cycle.

SHORT ESSAY (Answer any Six)

6 X 5 = 30 Marks

3. Urea cycle.
4. Formation of ketone bodies and its clinical significance.
5. What are lipoproteins? Describe their composition and functions.
6. Walder's visual cycle.
7. Name the key enzymes of gluconeogenesis. Explain how lactate is converted to glucose.
8. Explain the following aspects of thiamine- a) coenzyme form, b) biochemical function and c) deficiency.
9. Name the biochemical defect in the following disorders of amino acid metabolism a) Phenylketonuria, b) Alkaptonuria, c) Maple Syrup Urine Disease, d) Albinism, e) Homocystinuria
10. Describe the significance of the pentose phosphate pathway. Add a note on disorder of the pentose phosphate pathway.

SHORT ANSWERS (Answer any Ten)

10 X 3 = 30 Marks

11. What are Lipotropic factors? Give two examples.
12. What is the normal serum uric acid level? Mention two causes of hyperuricemia.
13. Any three compounds formed from cholesterol and their significance.
14. Creatinine clearance.
15. Role of carnitine in β oxidation.
16. Zymogens.
17. Renal glycosuria.
18. K_m value.
19. What are antivitamins? Give two examples.
20. Clinical significance of CPK.
21. Functions of vitamin K
22. Von Gierke's disease.

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PATHOLOGY

Q.P Code : AHS-107

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LONG ESSAY

2 X 10 = 20 Marks

1. Discuss aims and effects of fixation. Add a note on formalin fixative.
2. Describe various methods of decalcification.

SHORT ESSAY (Answer any Six)

6 X 5 = 30 Marks

3. Write about important records to be maintained in a laboratory.
4. Describe briefly what is paraffin impregnation in processing a tissue sample.
5. Dehydration and clearing.
6. Reception of specimen and dispatch of reports.
7. What are the steps processing of tissue in preparation of slide.
8. Cryostat.
9. Types of knives.
10. Simple microtome.

SHORT ANSWERS (Answer any Ten)

10 X 3 = 30 Marks

11. Name the uses of formaldehyde.
12. Bouins fixative.
13. Filing of slides.
14. Preparation of haematoxyline stain.
15. Name two fixatives used in cytology and its uses.
16. Name the substances lost during fixation.
17. Mountants.
18. Cell block technique in histopathology.
19. What is sharpening.
20. Stains used for collagen.
21. Name four nuclear fixatives.
22. Reticulin stain and its uses.

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MICROBIOLOGY

Q.P Code : AHS-109

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LONG ESSAY

2 X 10 = 20 Marks

1. Enumerate the salmonella causing enteric fever. Describe the pathogenesis and laboratory diagnosis of enteric fever. Write a note on its prophylaxis.
2. Describe briefly the morphology, pathogenesis and clinical presentation of treponema pallidum. Write about the laboratory diagnosis of syphilis.

SHORT ESSAY (Answer any Six)

6 X 5 = 30 Marks

3. Significant bacteriuria.
4. Relapsing fever.
5. Ventilator associated pneumonia.
6. Bacillary dysentery.
7. Rabbit ileal loop assay.
8. Traveller's diarrhea.
9. Cholera red reaction.
10. Kaufmann white classification.

SHORT ANSWERS (Answer any Ten)

10 X 3 = 30 Marks

11. Pigments produced by pseudomonas.
12. Salmonella gastroenteritis.
13. Premunition immunity.
14. Name the species of shigella.
15. Name four bacteria causing food poisoning.
16. RPR test.
17. Name four selective media.
18. Vi antigen.
19. Anamnestic reaction.
20. Eltor vibrio.
21. Biological false positive reactions.
22. Verotoxigenic E coli.