

Seat No: _____

Enrollment No: _____

PARUL UNIVERSITY
DEPARTMENT OF PARAMEDICAL AND HEALTH SCIENCES
B.Sc. Med. Sci. April-2023 Examination

Year : 3

Subject Code: 19106301

Subject Name: Medical Laboratory Technology - I

Date: 11-04-2023

Time: 10:00 am to 1:00pm

Total Marks: 70

Instructions:

1. All questions are compulsory.
2. Figures to the right indicate full marks.
3. Make suitable assumptions wherever necessary.
4. Start new question on new page.

- Q.1(A): Answer the following questions in details (2 out of 3) (Each worth 7.5 marks) 15 marks**
- (i) Define: Gluconeogenesis. Explain in detail.
 - (ii) Enlist the Liver function tests. Explain any 3 of them.
 - (iii) Enlist the inborn errors of amino acid metabolism. Explain – PKU and Alkaptonuria.
- Q.1(B): Answer in short (5 out of 7) (Each worth 1 marks) 05 marks**
- (i) Name the end-products formed from glycine.
 - (ii) What is PCR?
 - (iii) What is External quality control?
 - (iv) Define: Detoxification
 - (v) What is translation in central dogma?
 - (vi) Name the products derivatives from cholesterol.
 - (vii) Name any two phospholipids.
- Q.2(A): Write short notes on any of the following (3 out of 5) (Each worth 5 marks) 15 marks**
- (i) Write a note: Urea Cycle
 - (ii) Write a note: Gout
 - (iii) Write a note: GTT
 - (iv) Write a note: Lactose intolerance
 - (v) Write a note: Transcription
- Q.2(B): Answer in short (5 out of 7) (Each worth 1 marks) 05 marks**
- (i) Name the end product of purine degradation.
 - (ii) Define: Precision
 - (iii) Albinism is caused due to the deficiency of enzyme.
 - (iv) What is LJ chart?
 - (v) Name the enzymes involved in DNA replication.
 - (vi) List down the tests that can be used to assess kidney functioning.
 - (vii) List of the tests done for thyroid functioning.
- Q.3: Write a detailed note on the following (2 out of 3) (Each worth 7.5 marks) 15 marks**
- (i) Define Glycolysis. Explain its steps in detail with its energetics.
 - (ii) Define ketosis. Explain the ketone body formation.
 - (iii) Write a note: Ammonia formation and its detoxification. Give its disorders.
- Q.4: Write short notes on any of the following (3 out of 5) (Each worth 5 marks) 15 marks**
- (i) Explain the importance of HMP shunt pathway.
 - (ii) Short note: Southern blotting and its applications.
 - (iii) Explain the components of pre-analytical errors.
 - (iv) Explain: Beta-oxidation of palmitic acid.
 - (v) Explain: Diabetes Mellitus