

PARUL UNIVERSITY
FACULTY OF MEDICINE
M.B.B.S, July-2019 Examination

Year: 1

Subject Code: 19100106

Subject Name: Biochemistry Paper- II

Date: 26/07/2019

Time: 10:30am to 01:00pm

Total Marks: 50

Instructions:

1. Attempt all questions from each section.
2. Figures to the right indicate full marks.
3. Make suitable assumptions wherever necessary.
4. Write section-A, section-B, section-C on separate answer sheets.

SECTION – A**Q.1 Essay** **(10)**

Describe the DNA replication and add a note on telomerase.(8+2=10)

Q.2 Write short notes on: (any two out of three) **(08)**

- (a) Discuss the role of kidney in the maintenance of blood pH.
- (b) PCR and its applications.
- (c) Describe uric acid formation and mention the clinical significance of its estimation.

SECTION – B**Q.3 Discuss on: (any three out of four)** **(15)**

- (a) List various Renal function tests and give the importance in assessing the function of kidney
- (b) Name the compounds derived from Glycine. Explain any two in detail
- (c) Catabolism of heme and fate of bilirubin. Discuss disorders associated with it.
- (d) A 50 year old obese man after spending the evening at a business dinner, got up early next morning because of excruciating pain in his left big toe. The affected joint was hot, swollen, red and extremely tender. Laboratory investigations showed-
Serum glucose= 90mg/dl, Serum urea= 20mg/dl, Serum uric acid= 16mg/dl.
He was prescribed anti inflammatory drugs and allopurinol. He was also advised to restrain alcohol consumption.

- Q. i) What is the probable diagnosis? Justify.
- Q. ii) What are the primary causes of hyperuricemia?
- Q. iii) What are the secondary causes of hyperuricemia?
- Q. iv) How is allopurinol helpful?
- Q. v) Why alcohol precipitates an attack of gout ?

SECTION – C**Q.4 Write briefly on: (any four out of five)** **(12)**

- (a) Tumour Markers
- (b) Describe the fluid mosaic model of cell membrane
- (c) Mucosal block theory of iron absorption.
- (d) Classify Immunoglobulin's with their function & Draw a neat label structure of Immunoglobulin molecule showing various regions and domains.
- (e) Antioxidants

Q.5 Answer - MCQ **(05)**

1. Which of the following enzyme is NOT a protein
 - (a) Reverse transcriptase
 - (b) RNA polymerase
 - (c) Peptidyl transferase
 - (d) Restriction endonuclease
2. Hyperventilation is a compensatory respiratory response to
 - (a) Metabolic alkalosis
 - (b) Metabolic acidosis
 - (c) Respiratory alkalosis
 - (d) Respiratory acidosis

3. The amino acid which is associated with atherosclerosis is
(a) Lysine (b) Alanine
(c) Cystenine (d) Homocysteine
4. Which of the following is key regulator enzyme of heme synthesis?
(a) Porphobilinogen deaminase (b) PBG synthase
(c) Uroporphyrinogen III synthase (d) ALA synthase
5. All of the following amino acid contribute to purine synthesis EXCEPT
(a) Glutamine (b) Glycine
(c) Aspartate (d) Cysteine