

2/230

0119E546

Candidate's Seat No : \_\_\_\_\_

First M.B.B.S. Examination  
Bio-Chemistry  
Paper-II

Date : 11-01-2019, Friday]

[Max. Marks : 50

[Time : 3 Hours

- Instructions :** (1) Answer to the point.  
(2) Figure to the right indicates marks.  
(3) Draw diagrams wherever necessary.  
(4) Write legibly.  
(5) Use separate answer books for each section.

## Section 1

1) Write short notes on (any two):

2x5=10 marks

- 1) Alcohol and acute gouty arthritis
- 2) Rickets and role of vitamin D
- 3) Maple syrup urine disease

2) Write short notes on (any three):

3x3=9 marks

- 1) Watson crick model of DNA
- 2) Salvage pathway of purine synthesis
- 3) Polymerase chain reaction
- 4) Lac operon concept
- 5) Post translational modifications

3) Write short notes on (any two):

2x3=6 marks

- 1) Basal metabolic rate (BMR)
- 2) Dietary fiber
- 3) Nitrogen balance

## Section 2

4) Write short notes on (any two):

2x5=10 marks

- 1) Biochemical functions of selenium
- 2) Transamination
- 3) Secondary structure of proteins

P.T.O.]

0119E546(2)

5) Write short notes on (any three):

3x3=9 marks

- 1) Biochemical role of vitamin C
- 2) Regulation of purine synthesis
- 3) Sources of carbon and nitrogen atoms in purine ring
- 4) Hemopoietic vitamins
- 5) Orotic Aciduria

6) Case Study (Answer any six):

6x1=6 marks

One evening, a 40 year old male a businessman enjoyed a party in which he consumed meat and alcohol. The next morning he woke up with excruciating pain in great toe. He was admitted in the hospital, on examination, he had fever, his great toe was swollen, red, and too hot to touch and was tender and stiff. Lymph nodes were normal not tender. The laboratory data were:

Blood glucose : 130mg/dl

Blood Urea : 38mg/dl

Serum creatinine : 1mg/dl

Serum uric acid : 10mg/dl

Urine pH : 6.2

- 1) What is the most probable diagnosis?
  - 2) Which part of the case history & laboratory data helped you to reach the diagnosis?
  - 3) What is the origin and fate of uric acid?
  - 4) What are the causes of primary and secondary Hyperuricemia?
  - 5) What is the cause of gouty arthritis? Explain the pathogenesis.
  - 6) Which type of food will precipitate an attack of gout?
  - 7) What is the short term and long term treatment of gout?
  - 8) What is the biochemical basis of such treatment policy?
-