

# 2019 Scheme

Q.P. Code: 116001

Reg. no.: .....

## First Professional MBBS Degree Supplementary (SAY) Examinations August 2021

### Biochemistry - Paper II

Time: 3 Hours

Total Marks: 100

- Answer all questions to the point neatly and legibly • Do not leave any blank pages between answers • Indicate the question number correctly for the answer in the margin space
- Answer all parts of a single question together • Leave sufficient space between answers
- Draw table/diagrams/flow charts wherever necessary

#### Long Essays

(2x15=30)

1. A 45-year-old male patient reported to orthopedics outpatient department on Monday morning with pain and swelling of first metatarsophalangeal joint of right foot. He had consumed alcoholic drinks heavily on Saturday night. On examination the first metatarsophalangeal joint of right foot was warm, swollen and tender.
  - What is your diagnosis
  - What are the causes of this disorder
  - What are the investigations to confirm this disorder
  - What are the biochemical basis of management of this condition. (1+8+3+3)
2. Write the definition, steps and inhibitors of transcription. (1+11+3)

#### Short essays

(5x8=40)

3. Principles and application of ELISA (2+6)
4. Define metabolic acidosis. What are the characteristic features and causes of metabolic acidosis. Mention the compensatory mechanisms. (1+3+2+2)
5. Enumerate the applications of recombinant DNA technology. Add a note on vectors (6+2)
6. Describe the structure and functions of immunoglobulins
7. Mention the biochemical functions of calcium and describe the blood calcium homeostasis (4+4)

#### Short answers

(5x4=20)

8. Role of cytokines in immunity.
9. Define mutations. Describe the causes of mutation (2+2)
10. Hormones as tumor markers
11. Explain the absorption of iron
12. Explain the Watson and crick model of DNA

#### Give Precise Answers

(10x1=10)

13. Rf value
14. Mention any two applications of PCR
15. Mention the enzyme deficient in Lesch Nyhan syndrome
16. Name two post translational modifications.
17. Name any two zinc containing enzymes
18. Name the RNA with catalytic activity
19. Two causes of respiratory acidosis
20. Name two characteristics of Genetic Code.
21. Give biological reference range for serum sodium
22. Bence – Jones proteins

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