

# 2019 Scheme

Q.P. Code: 116001

Reg. no.: .....

## First Professional MBBS Degree Regular/Supplementary Examinations February 2022 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 70-year-old male presented to his family physician with yellow discoloration of sclera associated with epigastric pain and weight loss. Urine had become darker in color and his stools pale. A CT scan of the abdomen revealed a tumor in the pancreas. Investigations: Total Bilirubin – 4.2mg/dl; Direct Bilirubin – 3.8mg/dl; ALP – 510U/L; AST – 80U/L; ALT -76U/L. Answer the following using the above data:
  - What is the probable diagnosis
  - Define and classify Jaundice
  - Which enzyme is specific for this type of jaundice and why
  - Explain the urinary findings
  - Why urine is dark in color and stools pale
  - Enumerate the causes of jaundice
  - List the laboratory investigations used to differentiate between the types of jaundice. (1+2+2+2+2+3+3)
2. Describe the process of transcription by providing the details on the following
  - Requisites (1)
  - Promoters (1)
  - Pre – initiation complex (2)
  - Initiation, Elongation and termination (2+2+2)
  - Inhibitors (2)
  - Post – transcriptional modifications (3)

### Short essays

(5x8=40)

3. What is the normal reference range for serum calcium. How is it regulated. (1+1+3+3)
4. Define metabolic alkalosis. What are the characteristic features and causes of metabolic alkalosis. Mention the compensatory mechanisms (1+3+2+2)
5. Describe the various stages of replication and add a note on DNA repair mechanism (4+4)
6. Primary and secondary immune response (4+4)
7. What are the sources for purine ring. Enumerate the reactions in de novo synthesis of purine nucleotide. Add a note on its regulation. (2+4+2)

(PTO)

**Short answers**

**(5x4=20)**

8. Collagen
9. Antioxidants
10. Give two examples for Phase II detoxification reaction.
11. C peptide
12. Structure of tRNA and its function

**Give Precise Answers**

**(10x1=10)**

13. Reference level of S. creatinine and blood urea.
14. Mention any two applications of Electrophoresis
15. Two tumour suppressor genes.
16. Mention any two post translational modifications
17. Name any two Iron containing enzymes
18. Give the principle of RIA
19. Give the normal albumin : globulin ratio
20. Wobble effect
21. Two enzymes as tumor markers and their clinical relevance
22. Give the names of compounds used for estimating clearance

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