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MANIPAL ACADEMY OF HIGHER EDUCATION

THIRD SEMESTER M.Sc. (MEDICAL BIOCHEMISTRY) DEGREE EXAMINATION – FEBRUARY/MARCH 2022

SUBJECT: ENDOCRINOLOGY, IMMUNOLOGY, HEME METABOLISM (MBC 701)

Monday, February 28, 2022

Time: 14:00 – 16:30 Hrs.

Maximum Marks: 50

Answer the following in detail:

1. Discuss in detail Heme biosynthesis and degradation. How is it regulated?
(10 marks)
2. Explain the synthesis and regulation of thyroid hormones. Add a note on associated disorders.
(10 marks)
3. **Write short notes on:**
 - 3A. G-protein mediated signal transduction
 - 3B. Serum bilirubin estimation and its significance
 - 3C. Autoimmune disorders with two suitable examples
 - 3D. Biochemical investigations for Diabetes Mellitus.
 - 3E. Detoxification of xenobiotics
 - 3F. Structural variation in HbS and its effects

(5 marks × 6 = 30 marks)



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THIRD SEMESTER M.Sc. (MEDICAL BIOCHEMISTRY) DEGREE EXAMINATION – FEBRUARY/MARCH 2022

SUBJECT: CLINICAL BIOCHEMISTRY AND, LABORATORY MANAGEMENT (MBC 703)

Tuesday, March 01, 2022

Time: 14:00 – 16:30 Hrs.

Maximum Marks: 50

✍ Answer ALL the questions.

✍ Write your answers with diagrams wherever necessary.

✍ Long answer questions:

1. Explain the liver function tests.

(10 marks)

2. Discuss automation in a clinical laboratory

(10 marks)

3. Short answer questions:

3A. Biomarkers of prostate and cardiac function

3B. Pre-analytical error management in clinical laboratory

3C. Blood gas analysis

3D. i) Bence Jones Proteins

ii) Specificity and sensitivity: Definition, examples and their significance in a medical testing lab

3E. Ascitic and pleural fluid analysis

3F. Biomedical waste management

(5 marks × 6 = 30 marks)

