Q.P. CODE: M102A030

DR NTR UNIVERSITY OF HEALTH SCIENCES : VIJAYAWADA- 520008

MBBS DEGREE EXAMINATION: OCTOBER, 2024

FIRST M.B.B.S. EXAMINATION

BIOCHEMISTRY PAPER-I

(Theory Questions)

Time: 2 Hour 40 Minutes **Max Marks: 80**

Note: Answer all questions.

Draw diagrams, representation wherever necessary.

SECTION-II (THEORY QUESTIONS - 80 MARKS)

STRUCTURED ESSAY QUESTIONS: **2x15=30**

1. A 50-year-old male attended the casualty department with complaints of chest pain, fatigue, and uneasiness in daily activities. On laboratory examination, the total cholesterol was 293 mg/dl, LDL cholesterol - 160 mg/dl, and his triglycerides were 300mg/dl.

2. Write in detail about the types, characteristics, and metabolism of lipoproteins. Add a note on lipoprotein disorders.

Describe the chemistry, biochemical functions, daily requirements, sources, and deficiency manifestations of Vitamin A.

SHORT ANSWER QUESTIONS: **10x5=50**

3. Explain the specificity of an enzyme with examples.

4. Describe the electron transport chain. Add a note on inhibitors of ETC.

5. Enumerate the types of polysaccharides and their functions.

6. Sucrose intolerance.

7. Define BMR. What is its normal value? What are the factors affecting BMR?

8. A 40-year-old obese woman presented to the medical OPD with a complaint of right upper abdominal pain, mild fever, loss of appetite, and generalized itching. Furthermore, she gave a history of frothy clay-colored stool and high-colored urine. Her lab data is as follows: Total bilirubin - 12 mg%, Direct bilirubin - 10 mg%, Indirect bilirubin - 2 mg%, SGPT - 3 IU/L, SGOT - 50 IU/L, ALP - 350 IU/L.

a) What is the probable diagnosis?

b) How do you differentiate jaundice based on Vanderberg's reaction?

9. What is clearance? What are the different types of clearance tests you know, and write their importance?

10. Describe the metabolic adaptations during starvation.

11. Write about the biochemical effects of reactive oxygen species.

12. What are isoenzymes? Describe the clinical significance of cardiac isoenzymes.

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