

Q.P. CODE:M102A031**Dr YSR UNIVERSITY OF HEALTH SCIENCES: VIJAYAWADA- 520008****MBBS DEGREE EXAMINATION - MARCH, 2024****FIRST M.B.B.S. EXAMINATION****BIOCHEMISTRY - PAPER-II****(Theory Questions)****Time: 2 Hour 40 Minutes****Max Marks: 80****Note: Answer all questions.****Draw diagrammatic representation wherever necessary**

SECTION-II (THEORY QUESTIONS - 80 MARKS)**STRUCTURED ESSAY QUESTIONS:****2 X15 = 30**

1. What is the normal blood pH? Describe the regulatory mechanisms of blood pH. Explain about renal regulation of blood pH. Add a note on the anion gap.

2. A 3-year-old child was brought to the hospital by the parent with the complaint of the child's diapers becoming black. Answer the following:

- a) What is your probable diagnosis?
- b) Which metabolic pathway is affected?
- c) What is the biochemical cause behind the black diapers?
- d) What are the important compounds derived from tyrosine?

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

3. Classify hormones? Describe the mechanism of action of group 1 hormones.

4. Describe the steps of PCR and its applications.

5. Define immunity. Describe the types of immunity and add a note on acquired immunity.

6. Explain the transport mechanisms across the cell membrane.
7. Define and describe the different types of mutations with examples.
8. Write about sources, RDA functions, and regulation of Calcium in our body.
9. Enumerate the tumor markers and their role in cancer diagnosis.
10. Enumerate the steps of Uric acid synthesis and add a note on its clinical importance.
11. Describe transcription of mRNA in Prokaryotes and add a note on post-transcriptional modifications.
12. Describe the structure and functions of collagen.

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