

SRI DEVARAJ URS ACADEMY OF HIGHER EDUCATION & RESEARCH
(A DEEMED TO BE UNIVERSITY)

M.B.B.S. PHASE – I Degree Examination – January-2017

Time : 3 Hrs.

[Max. Marks : 100]

BIOCHEMISTRY

Q.P Code : RS -105

Your answers should be specific to the questions asked.

Draw neat labeled diagrams wherever necessary.

LONG ESSAY (Answer any Two)

2 X 10 = 20 Marks

1. What are nucleotides? Explain the synthesis of purine nucleotides by salvage pathway. Write briefly on the metabolic disorders associated with purine metabolism.
2. Explain in detail the metabolism of phenylalanine in the human body. Mention the associated inborn errors.
3. Explain how palmitic acid is oxidized in our body. How much energy is released? Explain how Acetyl CoA level is regulated.

SHORT ESSAY (Answer any Ten)

10 X 5 = 50 Marks

4. Pyruvate dehydrogenase complex.
5. Define isoenzymes. Give two examples of isoenzymes.
6. Plasma buffers and the role of buffers in the regulation of pH.
7. Regulation of plasma calcium. What is the biological reference interval of calcium in plasma.
8. Primary and secondary structure of proteins.
9. What is transcription? Write about post transcriptional modifications.
10. Define electrophoresis? Mention types of electrophoresis and its use in diagnostic medicine.
11. Aspartate malate shuttle and its importance.
12. Prostaglandins and their functions.
13. Write the sources and RDA of thiamin and its biochemical functions. Add a note on its deficiency manifestations.
14. Classify immunoglobulins and write about their significance.
15. Factors effecting absorption and biochemical functions of iron in the body. Write the daily requirement of iron by our body.

SHORT ANSWERS (No choices)

10 X 3 = 30 Marks

16. Give an account of amylases in our body. How is starch digested?
17. What is carcinogenesis? List a few anticancer agents.
18. What is hypo and hyperkalemia. Write the biological reference interval for potassium.
19. Mention the biochemical defect in.
a) Homocystinuria . b) Hartnup disease C) Maple syrup urine Disease
20. Mention the biochemical defect in. a) Wilson's disease b) hyponatremia c) Osteoporosis
21. Types of RNA and function of ribosomal RNA (rRNA).
22. What is transamination. Give two examples of transamination.
23. Biochemical functions of fluoride and Iodine.
24. What are oncogenes? Give two examples.
25. Give a brief note on formation of bile pigments.