Reg. No. :

Question Paper Code: 93D06

B.E./B.Tech. DEGREE EXAMINATION, DEC 2021

Third Semester

Bio technology

19UBT306- Biochemical Metabolism

(Regulation 2019)

Duration: Three hours   Maximum: 100 Marks

Answer ALL Questions

PART A - (10 x 2 = 20 Marks)

1. Draw the structure of Mitochondria and label it   CO1 U

2. Write a short note on oxysomes of mitochondria   CO1 U

3. List various stages of Hill reaction of photosynthesis   CO1 U

4. Why C4 plants are special and draw the cross sectional view of C4 plant leaf.   CO1 U

5. List the amino acids which helps as precursors in neurotransmitter formation   CO1 U

6. Draw the overview of protein metabolism   CO1 U

7. Draw the overall metabolism how ketone bodies are formed and utilized.   CO1 U

8. Write a short note on CTP synthesis.   CO1 U

9. Write a short note on system biology.   CO1 U

10. List some tools for Holistic approaches.   CO1 U

PART – B (5 x 16= 80 Marks)

11. (a) Explain in detail how ATP synthesis occurs in ETC   CO1- U   (16)

Or

    (b) Explain in detail different types of energy reactions occurs during metabolism   CO1- U   (16)

12. (a) Write a detailed note on glucose oxidation   CO1- U   (16)

Or

    (b) Explain in detail Blackman's reaction in photosynthesis and differentiate it from Hatch and Slack pathway.   CO1- U   (16)

13. (a) Explain in detail how protein obtained by diet is absorbed the   CO1- U   (16)
        body and give an overview of its metabolism.

                                        Or

    (b) How amino acids are metabolized and used for first line of   CO1- U   (16)
        defence by immune system and neurotransmitter formation.
        Explain in detail

14. (a) How saturated fatty acids were oxidized? Explain in detail.   CO1- U   (16)

                                        Or

    (b) Explain in detail how purines are metabolized?   CO1- U   (16)

15. (a) Write a detailed note on how system biology is used in various   CO1- U   (16)
        data integration process.

                                        Or

    (b) Write a detailed note on various biological aspects and their   CO1- U   (16)
        corresponding model