

Reg. No. :

--	--	--	--	--	--	--	--	--	--

Question Paper Code: 93B03

B.E. / B.Tech. DEGREE EXAMINATION, NOV 2022

Third Semester

Biomedical Engineering

19UBM303 - BIOCHEMISTRY

(Regulation 2019)

Duration: Three hours

Maximum: 100 Marks

Answer ALL Questions

PART A - (10 x 2 = 20 Marks)

1. How do you differentiate endosmosis with exosmoses by their process? CO3 AN
2. How do you apply third law of Thermodynamics in our life with an example? CO2 APP
3. Is it possible to ensure monosaccharide using barford's solution? CO3 AN
4. How much amount of ATP will be produced in single TCA cycle? Explain step by step method. CO3AN
5. List the various formation of proteins. CO1 U
6. Draw the overview of amino acid metabolism CO1 U
7. Draw the overall steps of Lock and Key model. CO1 U
8. List out the chemical properties of fats. CO1 U
9. Write a short note on nitrogen fixation. CO1 U
10. List some techniques for RNA extraction. CO1 U

PART – B (5 x 16= 80Marks)

11. (a) What is Biomolecules? Explains and classify biomolecules with an example. CO1- U (16)
Or
(b) Illustrate central dogma of molecular biology with neat diagram. CO1- U (16)
12. (a) Define carbohydrate metabolism. How do you analyze carbohydrate by two conformational tests and explain its principle? CO2- U (16)
Or

- (b) Explain the physical and chemical properties of Carbohydrates. CO2- U (16)
How do you estimate different range of blood glucose level by specific biochemical test?
13. (a) Explain in detail how protein is folding in cell. Justify the CO3- Ana (16)
interactions between the aminoacids doing significant role in Protein folding.
- Or
- (b) Explain in detail of Watson and Crick DNA Model. Is Chargaff's CO3- Ana (16)
rules helped Watson-Crick model DNA? Justify this statement.
14. (a) Explain fat with its physical and chemical properties. Categorize CO3- Ana (16)
lipids and give examples for each class along with functions.
- Or
- (b) Elaborate in brief how the enzymes are functioned and its CO3- Ana (16)
mechanism. How do you improve the activity of enzymes with an example.
15. (a) Define carcinogens and explain how it is responsible for CO3- Ana (16)
Atmospheric Changes
- Or
- (b) Discuss about electrophoresis and analyze the mechanism to CO3- Ana (16)
separate DNA

