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Candidate's Seat No :_____

B.Sc Sem.-5 Examination

CC 304

Biochemistry

Time : 2-30 Hours] **November-2024** **[Max. Marks : 70**

Instructions:

1) All Questions in Section I and Section II are compulsory and carry equal marks

2) Illustrate your answers with neat diagrams wherever necessary

Q1. (A)	Explain Chemotaxis movement in bacteria. With examples, give the different types of flagellar arrangement found in bacteria.	(07)
(B)	Discuss size,shape and arrangement of different bacterial cells with examples.	(07)
	OR	
Q1. (A)	List the functions of bacterial capsule. Discuss the economic importance of capsule.	(07)
(B)	List five salient features each of Archaebacteria and Viruses.	(07)
Q2. (A)	Define Stain. What is the importance of staining and making a bacterial smear. Write a brief note on fixation and types of fixations.	(07)
(B)	Explain the principle, procedure and results and importanceof Gram staining.	(07)
	OR	
Q2. (A)	Define: Acid, Basic, Neutral, Amphoteric stains and Compound stains with examples. What are Leuco compounds?	(07)
(B)	Define mordant, types of mordants and mordanting procedures with examples.How are mordants different from intensifiers.	(07)
Q3. (A)	Discuss 1) Factor Affecting Nitrogen Balance 2) Dental Caries.	(08)
(B)	Write Note on Trans fats.	(06)
	OR	
Q3. (A)	Explain Briefly 1) Ketosis 2) Storage of Lipids.	(08)
(B)	Discuss the role of Protein.	(06)

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Q4. (A)	Briefly explain BMR and Factor Affecting BMR.	(09)
(B)	Discuss the Nutritional value of Meat.	(05)

OR

Q4. (A)	Discuss Advantage and Disadvantage of Vegetarianism.	(09)
(B)	Briefly Explain 1) SQ 2) SDA.	(05)

Q5. **Attempt any Seven out of the following:** (14)

1. What is LPS? Name the three parts of LPS
2. What are metachromatic granules? Give its function.
3. Draw a labelled diagram of bacterial endospore
4. Define auxochrome group and chromophore group with examples
5. What is the function of Trickling filters in sewage treatment.
6. Give the principle behind negative staining.
7. Define nitrogen balance and its types.
8. Define and explain the term "energy balance."
9. Explain the concept of the P/S ratio.
10. Define RDA and Balance diets.
11. Write the full form of BMR and define it.
12. Write the energy value and Protein content of 100 gm of Fruits.