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( February )

BIOCHEMISTRY

( Honours )

( Nutritional and Clinical Biochemistry )

[ BCHEM-502 ]

Marks : 56

Time : 3 hours

*The figures in the margin indicate full marks  
for the questions*

Answer **four** questions, taking at least **one**  
from each Part

PART—A

1. (a) Describe nutritive value and physiological significance of carbohydrates and fats. 7
- (b) Discuss the biological significance of iodine and its deficiency. 7

2. (a) What is BMR? Discuss the methods to measure BMR. 2+5=7
- (b) Explain the significance of recommended daily allowance of food. 7
3. (a) Discuss overnutrition in the context of obesity. 7
- (b) Distinguish between kwashiorkor and marasmus. 7

PART—B

4. (a) Define hyperglycemia. What are the consequences of prolonged hyperglycemia? 7
- (b) Describe how biological fluids are preserved. 7
5. (a) How are blood samples analyzed? Describe the major differences between plasma and serum. 2+5=7
- (b) Discuss the clinical significance of uric acid, glucose and total proteins in the urine. 7
6. (a) Discuss the clinical significance of enzymes in health and diseases. 7
- (b) What is kidney functions test? Discuss the various parameters to diagnose the kidney diseases. 2+5=7

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7. (a) Explain the inborn errors of metabolism. 7
- (b) Write short notes on any *two* of the following :  $3\frac{1}{2} \times 2 = 7$
- (i) Porphyrrias
  - (ii) Hypoglycemia
  - (iii) LDH

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