

**Odd Semester, 2020**

( Held in March, 2021 )

**BIO-CHEMISTRY**

( Honours )

( BCHEM-502 )

**( Nutritional and Clinical Biochemistry )***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) Explain the nutritional and physiological significance of carbohydrates. 7  
(b) What are vitamins? Discuss the physiological significance of water-soluble vitamins. 1+6=7
2. (a) What is basal metabolic rate (BMR)? Describe the factors affecting BMR. 2+5=7  
(b) Discuss the biological significance of iodine. 7

3. (a) Describe the role of recommended daily allowance of food in nutritional science. 7  
(b) How does overnutrition lead to chronic diseases? 7

**PART—B**

4. (a) Discuss the scope of clinical biochemistry in health and diseases. 7  
(b) Describe the methods for collection and preservation of serum and plasma. 7
5. (a) Discuss the inference obtained after analysis of urine and cerebral spinal fluid (CSF). 6  
(b) Discuss the normal value of any four important constituents in the blood. 8
6. (a) Explain the significance of enzymes used in clinical diagnosis. 7  
(b) Describe the clinical significance of any two of the following enzymes :  $3\frac{1}{2} \times 2 = 7$   
(i) Amylases  
(ii) Alkaline phosphatase  
(iii) CPK

( 3 )

7. (a) What is inborn error of metabolism?  
What is albinism?  $3+4=7$

(b) Write notes on any *two* of the following :  
 $3\frac{1}{2}\times 2=7$

(i) Alkaptonuria

(ii) Porphyrrias

(iii) Hypoglycemia

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