

Total No. of printed pages = 3

Bina Chowdhury Central Library
Girijananda Chowdhury University
Hatkhowapara, Azara, Ghy-17

ER 20-23T

Roll No. of candidate

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2023

D.Pharm. 2nd Year End-Term Examination
BIOCHEMISTRY AND CLINICAL PATHOLOGY

Full Marks – 80

Time – Three hours

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

1. Long Answers (Answer six out of seven) (6 × 5 = 30)
 - (a) Elaborate the qualitative tests and biological role of carbohydrates. (5)
 - (b) Give the classification of amino acids based on chemical nature and nutritional requirements with examples. (5)
 - (c) Write a note on diseases related to abnormal metabolism of carbohydrates. (5)
 - (d) Explain the factors affecting enzyme activity. (5)
 - (e) What are the normal and abnormal constituents of urine? Give their significance. (2.5 + 2.5 = 5)
 - (f) What are the steps involved in TCA cycle. (5)
 - (g) Discuss the components of nucleosides and nucleotides with examples. (5)

2. Short Answers (Answer ten out of eleven) (10 × 3 = 30)
 - (a) Write the classification of proteins based on composition. (3)
 - (b) Distinguish between monosaccharides and disaccharides. (3)
 - (c) Mention some qualitative test for proteins. (3)
 - (d) Give the function of lipoprotein in the body. (3)
 - (e) Write the functions of DNA and RNA. (3)
 - (f) Give the recommended dietary requirements of some minerals. (3)

[Turn over

- (g) Write the functions of lipids. (3)
- (h) Write a note on water turnover and balance. (3)
- (i) What is the pharmaceutical importance of enzymes? (3)
- (j) Give the clinical significance of lipid profile tests. (3)
- (k) What are purine and pyrimidine bases? (3)

3. Objective type (Answer ALL) (20 × 1 = 20)

- (a) Which of the following is not a disaccharide?
- (i) Maltose
 - (ii) Galactose
 - (iii) Lactose
 - (iv) Sucrose
- (b) Starch and glycogen are _____ class of carbohydrates.
- (c) Give an example of conjugated protein.
- (d) Structure of DNA was given by _____
- (e) Adenine and Guanine are _____ bases.
- (f) Which of the following is not a fat soluble vitamin(s)?
- (i) Vitamin D
 - (ii) Vitamin K
 - (iii) Vitamin E
 - (iv) Vitamin B
- (g) TCA cycle is also known as _____
- (h) Benedict's test is qualitative test for _____
- (i) Lipoprotein is _____ protein.
- (j) Breakdown of maltose gives _____ and _____
- (k) ORS is composed of _____
- (l) Most of the acidic drugs bind with:
- (i) Albumin
 - (ii) α -acid glycoprotein
 - (iii) Glycoprotein
 - (iv) All of the above

- (m) The binding of a drug to its receptor can be understood by _____ model.
- (n) Give an example of aromatic amino acid.
- (o) Mention any one performed test to assess the functioning of liver.
- (p) Amino acids are joined by _____ bonds.
- (q) What are the most diverse molecules in the cell?
- (i) Lipids
 - (ii) Mineral salts
 - (iii) Proteins
 - (iv) Carbohydrates
- (r) Important constituents of lipids are :
- (i) Ketones
 - (ii) Aldehydes
 - (iii) Fatty acids
 - (iv) Lactic acids
- (s) Maximum number of double bonds present in essential fatty acids is/are —

- (i) 1
 - (ii) 4
 - (iii) 6
 - (iv) 3
- (t) Human infertility is caused by deficiency of vitamin _____
- _____

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