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Brainware University
Barasat, Kolkata -700125**Term End Examination 2025-2026****Programme – B.Physiotherapy-2022/B.Physiotherapy-2023/B.Physiotherapy-2024/B.Physiotherapy-2025****Course Name – Clinical Biochemistry****Course Code - BPTC103****(Semester I)****Full Marks : 60****Time : 2:30 Hours**

[The figure in the margin indicates full marks. Candidates are required to give their answers in their own words as far as practicable.]

Group-A

(Multiple Choice Type Question)

1 x 15=15

1. Choose the correct alternative from the following :

- (i) What is the name of the drug which inhibits Na⁺/K⁺ pump across the cell membrane?
a) Taxol
b) Vinblastine
c) Ouabain
d) Quinone
- (ii) Choose among which one is a tricarboxylic acid?
a) Acetic acid
b) Succinic acid
c) citric acid
d) Oxaloacetic acid
- (iii) Name the enzyme employ as the rate-limiting step in glycolysis?
a) Enolase
b) Phosphofructokinase
c) Phosphohexose isomerase
d) Glyceraldehyde-3-phosphate dehydrogenase
- (iv) The diseases caused due to protein deficiency?
a) Anaemia
b) Kwashiorkor
c) Hypothyroidism
d) All of these
- (v) The term enzyme coined by
a) Pasteur
b) Ronald Ross
c) Buchner
d) Kunhe
- (vi) Which of the following is the simplest form of carbohydrates?
a) Carboxyl groups
b) Aldehyde and Ketone groups
c) Alcohol and Carboxyl groups
d) Hydroxyl groups and Hydrogen groups
- (vii) Amino acid is mostly synthesized from
a) Fatty Acid
b) mineral acids
c) alfa keto acids
d) Volatile acids
- (viii) The following anticoagulant binds with Ca²⁺ and prevents blood clotting
a) Heparin
b) oxalate
c) Protein c
d) All of them
- (ix) Write an example of aldo hexose-
a) Fructose
b) Galactose
c) Glucose
d) Mannose
- (x) Write an example of aromatic amino acid-
a) Phenylalanine
b) Tyrosine
c) Tryptophan
d) 1 & 2
- (xi) The vitamin employed for the formation of hydroxyproline (in collagen) is
a) Vitamin C
b) Vitamin A
c) Vitamin D
d) Vitamin E
- (xii) Discuss about best investigations to diagnose diabetes mellitus in pregnancy-
a) OGTT
b) HbA1c
c) Fasting and PP glucose
d) All of these
- (xiii) LDL and HDL are commonly interpreted as-

- a) Good cholesterol and Bad Cholesterol
 c) Assimilatory cholesterol & oxidative cholesterol
 (xiv) Write the scientific name of vitamin B12

- b) Bad cholesterol and Bad Cholesterol
 d) Oxidative cholesterol & Assimilatory cholesterol

- a) Cobalamin
 c) Biotin

- b) Riboflavin
 d) Folate

- (xv) Cite the name of vitamin which is also known as sterility vitamin

- a) Vitamin A
 c) Vitamin D

- b) Vitamin B complex
 d) Vitamin E

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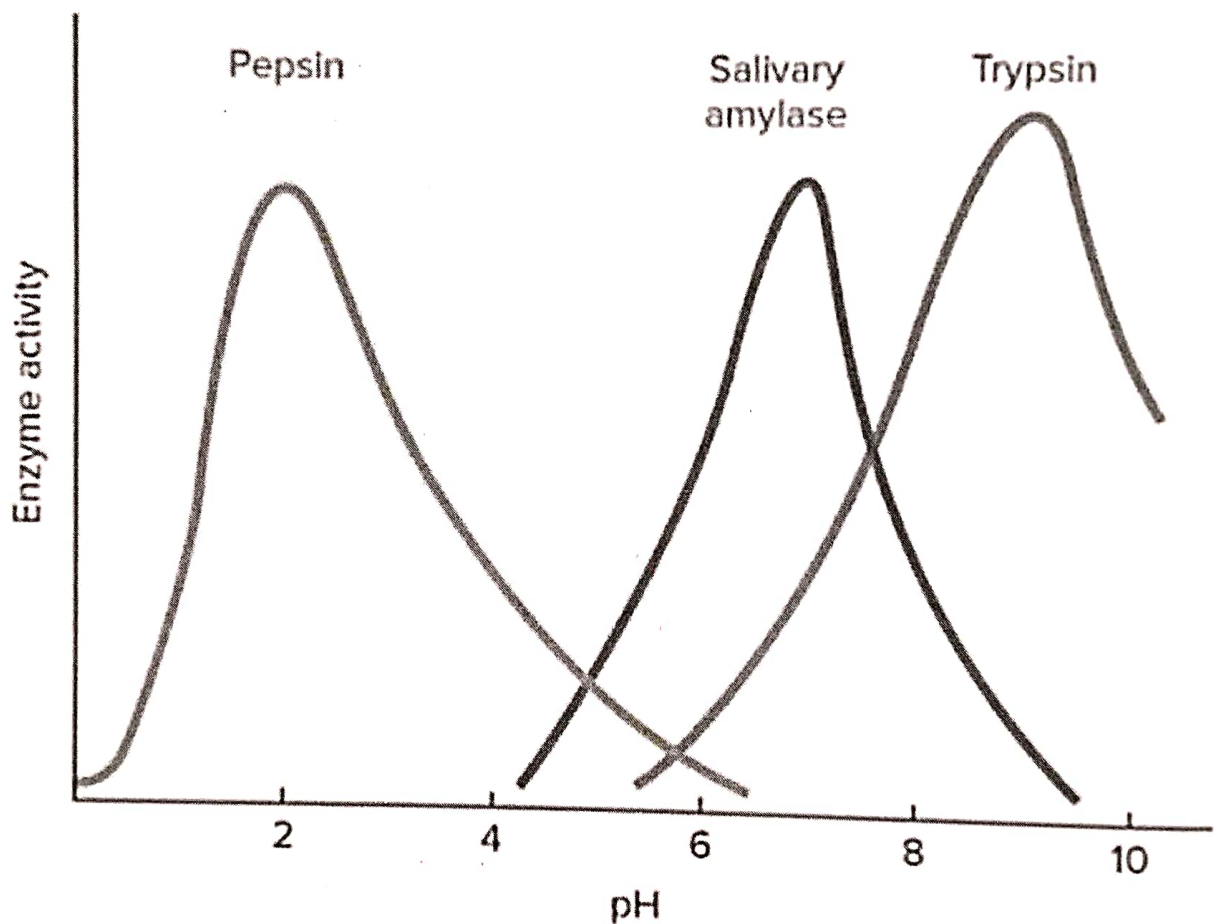
Group-B

(Short Answer Type Questions)

3 x 5=15

2. Write the functional classification of Protein. (3)
3. Define apoenzyme and Isozymes with example. (3)
4. Differentiate between fat soluble vitamin & water soluble vitamin with example (3)
5. Define Urea cycle and state its physiological importance (3)
6. Explain DNA denaturation (3)

OR



Analyze the result by enzyme activity

Group-C

(Long Answer Type Questions)

5 x 6=30

7. Describe visual cycle and relate with Vitamin A (5)
8. Define BMR. Discuss the factors affecting BMR. (5)
9. Describe the Liver function test and its associated parameters (5)
10. Define Allosteric enzyme (5)
11. Discuss the biochemical functions of vitamin C. Add a note on the therapeutic use of megadoses of this vitamin (5)
12. Elaborate the mechanism of insulin and glucagon in glucose regulation (5)

OR

Write the clinical implication of lipoproteins in lipid metabolism

(5)

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