



BRAINWARE UNIVERSITY

Term End Examination 2022
Programme – B.Physiotherapy-2022
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) Atherosclerosis can relate blood
- | | |
|----------------------|----------------|
| a) Thinning | b) Coagulation |
| c) vessels narrowing | d) thickening |
- (ii) Von Willebrand disease is correlated with
- | | |
|----------------------------|--|
| a) Platelet activation | b) fibrin formation |
| c) Platelet plug formation | d) Both fibrin formation and Platelet plug formation |
- (iii) HbA1c is applicable for the detection of
- | | |
|--------------|-------------|
| a) Cancer | b) Diabetes |
| c) Hepatitis | d) Anemia |
- (iv) Following fatty acid is solely found in breast milk
- | | |
|-----------------|---------------------|
| a) DHA | b) Arachidonic acid |
| c) Stearic acid | d) Elaidic acid |
- (v) Name which of the following solutions will act as a buffer?
- | | |
|---|------------------|
| a) HNO ₂ and NaNO ₂ | b) HCl and KCl |
| c) HNO ₃ and NH ₄ NO ₃ | d) NaOH and NaCl |
- (vi) Heparin is an example of:
- | | |
|--------------------|------------------------|
| a) Monosaccharides | b) Disaccharides |
| c) Polysaccharides | d) Mucopolysaccharides |
- (vii) Identify the major storage form of carbohydrates in animals
- | | |
|------------|-------------|
| a) Glucose | b) Glycogen |
| c) Starch | d) Chitin |
- (viii) Pick among the following enzymes is defective in galactosemia- a fatal genetic disorder in infants?
- | | |
|-------------------------------|--|
| a) Glucokinase | b) Galactokinase |
| c) UDP-Galactose 4- epimerase | d) Galactose-1-Phosphate Uridyltransferase |
- (ix) The first amino acid of any polypeptide chain in eukaryotes is
- | | |
|-----------|---------------|
| a) valine | b) methionine |
|-----------|---------------|

- c) glycine
d) alanine
- (x) Which of the following diseases is caused by the deficiency of Niacin?
a) Scurvy
b) Rickets
c) Pellagra
d) Pernicious anaemia
- (xi) This statement about enzymes is true
a) enzymes accelerate reactions by lowering the activation energy
b) enzymes are proteins whose three-dimensional form is key to their function
c) enzymes do not alter the overall change in free energy for a reaction
d) all of these
- (xii) _____ is a pressure chamber used to carry out processes at high temperature and pressure
a) Magnetic stirrer
b) Autoclave
c) Incubator
d) Hot Air Oven
- (xiii) The term apoenzyme is applicable to
a) Simple enzyme
b) Protein part of conjugated enzyme
c) Organic cofactor of conjugated enzyme
d) Inorganic cofactor of conjugated enzyme
- (xiv) Creatine kinase is important biomarker for
a) Myocardial infraction
b) Diabetes
c) Cancer
d) None of these
- (xv) An activated enzyme made of polypeptide chain and a co-factor is:
a) Coenzyme
b) Substrate
c) Holoenzyme
d) Apoenzyme

Group-B

(Short Answer Type Questions)

3 x 5=15

2. Restate Hyperkalemia in contrast with Hyponatremia. (3)
3. Elaborate the importance of fibers in nutrition. (3)
4. Classify Anemia based on the nutritional status (3)
5. Estimation of blood glucose level in blood. (3)
6. Speculate Net protein utilization (NPU) and its significance (3)

OR

Define Phenylketonuria and summarize with application area. (3)

Group-C

(Long Answer Type Questions)

5 x 6=30

7. Describe the characteristics and major functions of plasma protein (5)
8. Elaborate the inborn error metabolism and its associated disorders (5)
9. Write the significance of HMP Shunt. (5)
10. Define Ribozyme and its therapeutic application (5)
11. Elaborate the mechanism of insulin and glucagon in glucose regulation (5)

OR

- Write the clinical implication of lipoproteins in lipid metabolism (5)
12. Elaborate the assessment of jaundice and its clinical significance (5)

OR

Write an account of the various factors affecting enzyme activity (5)
