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BRAINWARE UNIVERSITY

Term End Examination 2023
Programme – B.Sc.(MLT)-2020/B.Sc.(MLT)-2021
Course Name – General Biochemistry
Course Code - BMLT202
(Semester II)

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) Predict the name of amino acid is involved in the synthesis of thyroxine
 - a) Tryptophan
 - b) Ornithine
 - c) Tyrosine
 - d) Threonine
- (ii) Find out which one is most stable DNA molecules at the physiological pH
 - a) Amphipathic
 - b) Positively Charged
 - c) Neutral
 - d) Negatively Charged
- (iii) Recognize the most stable and common form of DNA at physiological pH
 - a) A
 - b) C
 - c) B
 - d) Z
- (iv) Choose vitamin K is involved in which of following reaction
 - a) Decarboxylation
 - b) Carboxylation
 - c) Transaminatin
 - d) Hydroxylation
- (v) Choose which isnot a feature of niacin deficiency
 - a) Diarrhoea
 - b) Dementia
 - c) Diplopia
 - d) Dermatitis
- (vi) Write down the affect of atherosclerosis is _____
 - a) thinning blood vessels
 - b) clotting in blood vessels
 - c) thickeningf blood vessels
 - d) none of these
- (vii) Select the name of biomolecule from following which is not a component of a phospholipid?
 - a) Phosphate
 - b) Alcohol
 - c) Glycerol
 - d) Protein
- (viii) Choose the name from following which phospholipid is considered as a major constituent of nervous tissue?
 - a) Glycerophospholipid
 - b) Plasmalogen

- c) Inositol
d) Sphingomyelin
- (ix) The cholesterol serves as the precursor for the following biosynthetic pathways, EXCEPT _____ - Select from the following
- a) Bile acid synthesis
b) Steroid hormone synthesis
c) Aldosterone synthesis
d) Thyroid hormone synthesis
- (x) All about apoproteins are true, except- Identify
- a) Apoprotein AII inhibit lipoprotein lipase
b) Apoprotein AI activates LCAT
c) Apoprotein CIII activities lipoprotein lipase
d) Apoprotein CII activities lipoprotein lipase
- (xi) Select which of the lipoprotein have scavenging action is-
- a) HDL
b) IDL
c) VLDL
d) LDL
- (xii) All are true about urea cycle , except- Select
- a) Aspartate converted to fumarate
b) Ornithine-cituline transporter amino acids
c) N-Acetyl glutamate is allosteric inhibitor
d) Aspartate argino succinate shunt
- (xiii) Select which protein have property to absorb ultraviolet ray of light is due to
- a) Imono Group
b) Aromatic amino acid
c) Imidazole group
d) Both 2 & 3
- (xiv) Select which one of them is not amixed amino acids
- a) Isoleucine
b) Phenylalanine
c) Methionine
d) Typtophan
- (xv) Identify protein flexibility depends on _____ amino acid
- a) Glycine
b) Tyrosine
c) Phenylealanine
d) Lysine

Group-B

(Short Answer Type Questions)

3 x 5=15

2. Explain the formation of sucrose (3)
3. Writethe differentiation between nucleotide and nucleosides with example (3)
4. Differentiate between co-factor. Co-enzyme and prosthetic group. (3)
5. Discuss about the glycosidic linkage and give exampl (3)
6. Calculate the pH of a solution with $[H^+]=9.8 \times 10^{-10}$ M. (3)

OR

How do you determine the pH of a substance with an H^+ concentration of 3.2×10^{-3} ? (3)

Group-C

(Long Answer Type Questions)

5 x 6=30

7. Explain the handerson and hasselbalch equation (5)
8. Explain the reversible and irreversible enzyme inhibition along with proper example (5)
9. Writedown the relationship between proinflammatory and antiinflammatory molecules (5)
10. Explain intake of fish oil is good for health (5)
11. Discuss the structure of Watson-crick model of DNA (5)
12. Biarbonate is the primary chemical which mainly regulate our buffering system- justify with proper explanation (5)

OR

Sucrose in a non-reducing sugar where as lactose is a reducing sugar- Juscify with proper explanation. (5)
