

Date:

Registration number:

ST. JOSEPH’S COLLEGE (AUTONOMOUS), BENGALURU-27

B.Sc. Zoology - II SEMESTER

SEMESTER EXAMINATION: APRIL 2022

(Examination conducted in July 2022)

**ZO 221 - Biochemistry and Physiology**

**Time- 2 hrs**  **Max Marks-60**

This question paper contains two printed pages and three parts

**Part A**

**Answer all the ten questions by choosing a correct option 10 × 1 =10**

1. Migrating motility complexes are found in
2. Small intestine
3. Large intestine
4. Stomach
5. Rectum

1. Which one of the following vitamin deficiencies is most common cause for rickets?
2. Vitamin A
3. Vitamin B
4. Vitamin C
5. Vitamin D
6. The inspiratory reserve volume combined with tidal volume and expiratory reserve volume is called
7. Total lung capacity
8. Functional residual capacity
9. Vital capacity
10. Inspiratory capacity
11. The chemical process of joining monosaccharide units is referred to as,
12. Rehydration synthesis
13. Hydrolysis
14. Dehydration synthesis
15. Glycogenesis
16. Which one of the following is blood clotting factor-I ?
17. Fibrinogen
18. Prothrombin
19. Thrombokinase
20. Fibrin stabilizing factor
21. A covalent bond between the alpha carboxyl group of one amino acid and alpha amino group of the neighboring amino acid is called,
22. Cis double bond
23. Iso-peptide bond
24. Psudopeptide bond
25. Peptide bond
26. Which one of the following statements does not validate type of neuron?
27. Multipolar neurons are found in brain
28. Bipolar neurons are found in the retina of the eye
29. The olfactory area of the brain consists of unipolar neurons
30. Unipolar neurons are also called as pseudounipolar neurons
31. Hydrolysis of fat by an alkali is called
32. Saponification
33. Methylation
34. Alkylation
35. Esterification
36. Excess secretion of growth hormone post adolescence results in
37. Acromegaly
38. Dwarfism
39. Gigantism
40. Cretinism
41. Isoenzymes are:
42. Having same amino acid sequence
43. Physically different but have identical catalytic properties
44. Polymorphisms exhibited by the enzymes
45. Polypeptide chains that differ by single amino acid replacement

**Part B**

**Answer any 4 questions 4 × 5 =20**

1. Briefly explain hematopoiesis with a flow chart.
2. Give a brief account on Nomenclature and Classification of enzymes.
3. Describe the different modes of CO2 transport in blood.
4. What is action potential? Explain the origin and propagation of action potential across myelinated nerve fibers.
5. Describe the general properties of amino acids and add a note on conjugated proteins.
6. Describe absorption of lipids across small intestine.

**Part C**

**Answer any 2 questions 2 ×10 =20**

1. Explain the steps involved in Glycolysis with a diagrammatic representation.
2. Explain the molecular and chemical basis of muscle contraction.
3. Discuss pentose phosphate pathway.

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