647510 **BSc6ZooC601x** **Seat No :_____**

B.Sc. Semester - 6 (*CBCS*) Examination
April/May-2022 (NEW COURSE)
BioChemistry, Cytology, Instru. (Core (New))

Time: 2:30 Hours **Marks: 70**

Instructions:

1. All questions are compulsory.
2. Figures to the right indicate marks.

Q.1(A) **ANSWERS THE FOLLOWING QUESTIONS. (ANY ONE OUT OF TWO)** (07)

1. Give the classification and structure of polysaccharides with suitable examples.
2. Give the definition and classification of lipids with suitable examples.

Q.1(B) **ANSWERS THE FOLLOWING QUESTIONS. (ANY ONE OUT OF TWO)** (04)

1. Give the biological significance of lipid.
2. Write a Short note on Glyconeogenesis.

Q.1(C) **ANSWERS THE FOLLOWING QUESTIONS. (ANY THREE OUT OF FIVE)** (03)

1. List out the examples of disaccharides.
2. Give any two examples of the saturated fatty acids.
3. Which enzyme causes hydrolysis of fat into fatty acids and glycerol?
4. What is the final product of glycolysis?
5. β- Oxidation takes place in ……..

Q.2(A) **ANSWERS THE FOLLOWING QUESTIONS. (ANY ONE OUT OF TWO)** (07)

1. Give the classification of protein in detail.
2. Give the nomenclature and classification of Enzyme.

Q.2(B) **ANSWERS THE FOLLOWING QUESTIONS. (ANY ONE OUT OF TWO)** (04)

1. Write a short note on different configuration of proteins.
2. Write a short note on factors affecting enzyme activity.

Q.2(C) **ANSWERS THE FOLLOWING QUESTIONS. (ANY THREE OUT OF FIVE)** (03)

1. Which amino acid is the simplest amino acid?
2. Two amino acids are linked together by which bond?
3. Structure of hemoglobin is which type of protein.
4. Which of the enzyme is combination of apoenzyme and coenzyme?
5. Blocking of enzyme action by blocking its active site is called as…….

Q.3(A) **ANSWERS THE FOLLOWING QUESTIONS. (ANY ONE OUT OF TWO)** (07)

1. Describe phenomenon of meiosis prophase - I in detail.
2. Give the principle, procedure and application of paper chromatography.

Q.3(B) **ANSWERS THE FOLLOWING QUESTIONS. (ANY ONE OUT OF TWO)** (04)

1. Describe phenomenon of mitosis in detail.
2. What is cancer? Describe types of cancer.

Q.3(C) **ANSWERS THE FOLLOWING QUESTIONS. (ANY THREE OUT OF FIVE)** (03)

1. Which technique separates charged particles using electric field?
2. In process of paper chromatography locating agent of amino acid is …….
3. Neoplastic growth of leucocytes are cancer known as……..
4. Chromosome movement during cell division is regulated by……
5. Chiasmata formation takes place during which stage of meiosis?

Q.4(A) **ANSWERS THE FOLLOWING QUESTIONS. (ANY ONE OUT OF TWO)** (07)

1. Describe Ultrastructure and functions of metaphase chromosome.
2. Describe molecular structure of gene in detail.

Q.4(B) **ANSWERS THE FOLLOWING QUESTIONS. (ANY ONE OUT OF TWO)** (04)

1. Write a short note on colourblindness.
2. Write a short note on Radiation as mutagenic agent.

Q.4(C) **ANSWERS THE FOLLOWING QUESTIONS. (ANY THREE OUT OF FIVE)** (03)

1. X- rays and gamma rays are which type of mutagenic agents?
2. Lack of erythrolable pigment which is necessary for discrimination in red colour. This defect is known as……
3. The chromosomal ends are known as……..
4. During chromosomal mutation when broken segment reattached to original chromosome in reverse order is known as…….
5. Colourblindness and haemophilia are…….. linked inheritance.

Q.5(A) **ANSWERS THE FOLLOWING QUESTIONS. (ANY ONE OUT OF TWO)** (07)

1. Give the mode of replication and process of DNA replication in detail.
2. Describe different phases of Translation.

Q.5(B) **ANSWERS THE FOLLOWING QUESTIONS. (ANY ONE OUT OF TWO)** (04)

1. Write a short note – PCR technique
2. Write a short note- Southern Blotting Technique.

Q.5 (C) **ANSWERS THE FOLLOWING QUESTIONS. (ANY THREE OUT OF FIVE)** (03)

1. Give the function of helicase.
2. Which codon is considered as a start codon?
3. Okazaki fragments founds in which newly synthesized strand?
4. Which type of ribosome found in eukaryotic cell?
5. Northern blotting technique is used for ……

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