

B.Sc. Semester - 6 (CBCS) Examination
May/June-2021 (NEW COURSE)
BioChemistry, Cytology, Instru.(Core)

Time: 1:30 Hours**Marks: 42****Instructions:**

1. Figure to the right indicate marks.
2. There are five questions in the question paper.
3. Answer any three of the following questions.

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- Q.1(A) Answer The Following Questions. (Any One Out of Two) (07)**
1. Give the definition and classification of lipids with suitable examples.
 2. Give the classification and structure of carbohydrates with suitable examples.
- Q.1(B) Answer The Following Questions. (Any One Out of Two) (04)**
1. Give the biological significance of carbohydrates.
 2. Write a Short note on Glycolysis.
- Q.1(C) Answer The Following Questions. (Any Three Out of Five) (03)**
1. List out the examples of aldo hexose monosaccharides.
 2. Two monosaccharides are joined together by which bond?
 3. Glycolysis is take place in.....
 4. phospholipids are defined as the esters of..... , And.....
 5. Linoleic acids and α -Linolenic acid are the fatty acids.
- Q.2(A) Answer The Following Questions. (Any One Out of Two) (07)**
1. Give the nomenclature and classification of Enzyme.
 2. Describe different structures of proteins in detail.
- Q.2(B) Answer The Following Questions. (Any One Out of Two) (04)**
1. Give the biological significance of proteins.
 2. Write a short note on factors affecting enzyme activity.
- Q.2(C) Answer The Following Questions. (Any Three Out of Five) (03)**
1. Which amino acid is also called imino acid?
 2. The first amino group entering in to urea cycle is
 3. Alpha helical and beta sheet are the type of proteins.
 4. The "optimal temperature" for most of the enzymes in our body is
 5. All enzymes are.....
- Q.3(A) Answer The Following Questions. (Any One Out of Two) (07)**
1. Describe technique - Gel electrophoresis.
 2. Describe phenomenon of meiosis in detail.
- Q.3(B) Answer The Following Questions. (Any One Out of Two) (04)**
1. Write a short note on microtubules.
 2. Describe types of cancer.
- Q.3(C) Answer The Following Questions. (Any Three Out of Five) (03)**
1. Give any two functions of microtubules and microfilaments.
 2. In which stage of cell division nuclear membrane and nucleolus reappear.
 3. List out the stages of meiosis prophase I.
 4. In paper chromatography R_f value =
 5.are solid tumors growing from connective tissue, cartilage, bone and muscle?

- Q.4(A) **Answer The Following Questions. (Any One Out of Two)** (07)
1. Describe Ultrastructure and functions of metaphase chromosome.
 2. Describe Colour blindness and Haemophilia as a Human hereditary traits.
- Q.4(B) **Answer The Following Questions. (Any One Out of Two)** (04)
1. Write a short note on Radiation as mutagenic agent.
 2. Write a short note on amniocentesis.
- Q.4(C) **Answer The Following Questions. (Any Three Out of Five)** (03)
1. Lack of the erythroblastic pigment in the retinal cones results in an inability to discriminate red colours. This defect is known as.....
 2. In which form of DNA strands are wrapped plectonemically in a right-handed helix?
 3. Pentose sugar + nitrogen base =
 4. X- Rays, gamma rays, alpha and beta rays are which type of mutagenic agents?
 5. Nondisjunction of chromosome pair 21 during oogenesis is main cause of occurrence of
- Q.5(A) **Answer The Following Questions. (Any One Out of Two)** (07)
1. Describe different phases of Translation.
 2. Describe DNA replication with suitable diagram.
- Q.5(B) **Answer The Following Questions. (Any One Out of Two)** (04)
1. Write a short note – PCR technique
 2. Write a short note – Northern Blotting Technique.
- Q.5(C) **Answer The Following Questions. (Any Three Out of Five)** (03)
1. Give the function of topoisomerase.
 2. List out the initiation factors of translation.
 3. Okazaki fragments found in which newly synthesized strand?
 4. During translation, which sequence binds the mRNA to the ribosome near the first AUG.
 5. Southern blotting technique is used for
