

B.Sc. Semester - 5 (Remedial) (CBCS) Examination
March/April-2022(Old Course)
BIOCHEMI., CYTOLOGY, INSTRU., BIOLOGY (CORE)

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

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

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- Q.1(A) ANSWERS THE FOLLOWING QUESTIONS. (ANY ONE OUT OF TWO) (07)**
1. Give the classification of enzymes.
 2. Give the classification and structure of carbohydrates with suitable examples.
- Q.1(B) ANSWERS THE FOLLOWING QUESTIONS. (ANY ONE OUT OF TWO) (04)**
1. Write a short note on Importance of vitamins.
 2. Write a Short note on Glycolysis.
- Q.1(C) ANSWERS THE FOLLOWING QUESTIONS. (ANY THREE OUT OF FIVE) (03)**
1. Give any two examples of disaccharides.
 2. The simplest amino acid is.....
 3. Sucrose is also called as sugar.
 4. Urea production occurs almost in
 5. The enzyme, that joins a nonprotein prosthetic group to form functional enzymes, is known as
- Q.2(A) ANSWERS THE FOLLOWING QUESTIONS. (ANY ONE OUT OF TWO) (07)**
1. Describe phenomenon of prophase I of meiosis in details.
 2. What is cancer? Give the types of cancers in detail.
- Q.2(B) ANSWERS THE FOLLOWING QUESTIONS. (ANY ONE OUT OF TWO) (04)**
1. Write a short note on Microtubules.
 2. Write a short note on mitosis.
- Q.2(C) ANSWERS THE FOLLOWING QUESTIONS. (ANY THREE OUT OF FIVE) (03)**
1. The term cytokinesis refers to the division of
 2. is the cancer of blood.
 3. In meiosis, chromosome number becomes..... of its parent chromosome.
 4. Cell organelle provides mechanical support to the cell.
 5. Crossing over occurs between two homologous chromosomes in.....stage of prophase I.
- Q.3(A) ANSWERS THE FOLLOWING QUESTIONS. (ANY ONE OUT OF TWO) (07)**
1. Describe recombinant DNA technology in detail.
 2. Describe principle, method and application of paper chromatography.

- Q.3(B) **ANSWERS THE FOLLOWING QUESTIONS. (ANY ONE OUT OF TWO)** (04)
1. Describe technique - Gel electrophoresis.
 2. Write a short note on vector.
- Q.3(C) **ANSWERS THE FOLLOWING QUESTIONS. (ANY THREE OUT OF FIVE)** (03)
1. Amino acids are separated bytechnique.
 2. is the genetic engineering technique of joining together of distinct DNA molecules to produce new genetic combination as rDNA.
 3.technique separates charged particles using electric field?
 4.enzymes cut DNA at specific location.
 5.is the best example of DNA recombinant technology.
- Q.4(A) **ANSWERS THE FOLLOWING QUESTIONS. (ANY ONE OUT OF TWO)** (07)
1. Describe Haemophilia with suitable example.
 2. Describe molecular structure of gene.
- Q.4(B) **ANSWERS THE FOLLOWING QUESTIONS. (ANY ONE OUT OF TWO)** (04)
1. Write a short note on amniocentesis.
 2. Write a short note on ionizing radiations as mutagenic agent.
- Q.4(C) **ANSWERS THE FOLLOWING QUESTIONS. (ANY THREE OUT OF FIVE)** (03)
1. is a process to determine any hereditary disease of the embryo.
 2.involves loss of a broken part of chromosomes.
 3. Pentose sugar + nitrogenous base =
 4. Give any one example of X-linked inheritance.
 5. When two genetically units exhibit cis- trans phenomenon, they are consider to belong to the same functional unit, called.....
- Q.5(A) **ANSWERS THE FOLLOWING QUESTIONS. (ANY ONE OUT OF TWO)** (07)
1. Give a general account of DNA replication in detail.
 2. Describe Transcription in detail.
- Q.5(B) **ANSWERS THE FOLLOWING QUESTIONS. (ANY ONE OUT OF TWO)** (04)
1. Give the Name and function of enzymes involved in DNA replication process.
 2. Write a short note –Translation.
- Q.5 (C) **ANSWERS THE FOLLOWING QUESTIONS. (ANY THREE OUT OF FIVE)** (03)
1. The codon AUG is which type of codon?
 2. During replication of DNA, okazaki fragments are formed in the..... direction.
 3. Which step in transcription is catalysed by RNA polymerase?
 4. To initiate translation, the mRNA first binds to.....
 5. Give the function of helicase.
