

B.Sc. Semester - 5 (CBCS) Examination**Oct/Nov.- 2024 (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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- Que.1(A) ANSWERS THE FOLLOWING QUESTIONS. (ANY ONE OUT OF TWO) (07)
1. Give the classification and structure of Carbohydrates.
 2. Describe different structure of Proteins.
- Que.1(B) ANSWERS THE FOLLOWING QUESTIONS. (ANY ONE OUT OF TWO) (04)
1. Give a general account on types of Enzymes.
 2. Write a short note on importance of Minerals.
- Que.1(C) ANSWERS THE FOLLOWING QUESTIONS. (ANY THREE OUT OF FIVE) (03)
1. Which class of Carbohydrates, cannot be Hydrolyzed Further is known as
 2. Which type of protein is present in Cow's milk?
 3. Chemical name of Vitamin E is
 4. Urea production occurs almost exclusively in
 5. The Enzyme which bring about oxidation-reduction between two substrates are called.....
- Que.2(A) ANSWERS THE FOLLOWING QUESTIONS. (ANY ONE OUT OF TWO) (07)
1. Describe phenomenon of Prophase-I of Meiosis.
 2. What is Cancer? Give the types of Cancer and characteristic of Cancerous Cells.
- Que.2(B) ANSWERS THE FOLLOWING QUESTIONS. (ANY ONE OUT OF TWO) (04)
1. Describe Phenomenon of Mitosis.
 2. Write a short note on Microtubules.
- Que.2(C) ANSWERS THE FOLLOWING QUESTIONS. (ANY THREE OUT OF FIVE) (03)
1. List out the function of Intermediate Filaments.
 2. Which type of cell division occurs in the germ cells during the process of Gametogenesis?
 3. Which type of cancer majorly seen in Human?
 4. During which phase of mitosis, chromosomes arrange on Equatorial Plate?
 5. are tumors made up principally of connective tissue cells, which are of Mesodermal Origin.
- Que.3(A) ANSWERS THE FOLLOWING QUESTIONS. (ANY ONE OUT OF TWO) (07)
1. Describe principal, method and application of Paper Chromatography.
 2. Describe Recombinant DNA Technology in detail.
- Que.3(B) ANSWERS THE FOLLOWING QUESTIONS. (ANY ONE OUT OF TWO) (04)
1. Describe the process of Gel Electrophoresis.
 2. Write a short note on 'Vector'.
- Que.3(C) ANSWERS THE FOLLOWING QUESTIONS. (ANY THREE OUT OF FIVE) (03)
1. In process of Paper Chromatography, locating agent of amino-acids is
 2. is the best example of DNA recombinant technology.
 3. In Gel Electrophoresis, DNA molecules migrates from to ends of the Gel.
 4. Restriction enzymes are named for
 5. is the most common type of gel used for DNA separation.

- Que.4(A) ANSWERS THE FOLLOWING QUESTIONS. (ANY ONE OUT OF TWO) (07)
1. Describe Colorblindness.
 2. Describe Molecular Structure of Gene.
- Que.4(B) ANSWERS THE FOLLOWING QUESTIONS. (ANY ONE OUT OF TWO) (04)
1. Describe Amniocentesis.
 2. Write a short note on radiations as Mutagenic Agent.
- Que.4(C) ANSWERS THE FOLLOWING QUESTIONS. (ANY THREE OUT OF FIVE) (03)
1. Pentose sugar + Nitrogen base =
 2. The most effective Wavelength of Ultraviolet for inducing Mutations is about.....
 3. The transfer of a part of Chromosome or a set of genes to a Non-homologous one is called.....
 4. Two strands of DNA Helix is joined by bond.
 5. List out Chemical Mutagens.
- Que.5(A) ANSWERS THE FOLLOWING QUESTIONS. (ANY ONE OUT OF TWO) (07)
1. Describe DNA Replication.
 2. Write a short note on Transcription.
- Que.5(B) ANSWERS THE FOLLOWING QUESTIONS. (ANY ONE OUT OF TWO) (04)
1. Describe mode of DNA Replication.
 2. Write a short note on Translation.
- Que.5(C) ANSWERS THE FOLLOWING QUESTIONS. (ANY THREE OUT OF FIVE) (03)
1. What is the Start Codon?
 2. DNA Unwinding is done by
 3. The Enzyme used to join the okazaki fragments of DNA is.....
 4. Conversion of message carried by RNA in to amino acid sequence is called.....
 5. Transcription Occurs in.....
