

B.Sc. Semester - 5 (CBCS) Examination**Oct/Nov. - 2023(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) Answer the following questions. (any one out of two) (07)
1. Give the classification of carbohydrates with suitable examples.
 2. Give the different structure of protein.
- Que.1(B) Answer the following questions. (any one out of two) (04)
1. Give the classification of Enzymes.
 2. Write a short note on importance of minerals in short.
- Que.1(C) Answer the following questions. (any three out of five) (03)
1. Give any two examples of monosaccharides.
 2. Keratin type protein found in
 3. Urea production occurs almost in
 4. The enzyme that joins a non protein prosthetic Group to form functional enzymes is known as.....
 5. Give the chemical name of vitamin E.
- Que.2(A) Answer 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 in detail.
- Que.2(B) Answer the following questions. (any one out of two) (04)
1. Describe phenomenon of mitosis in detail.
 2. Write a short note on microtubules.
- Que.2(C) Answer the following questions. (any three out of five) (03)
1. During which phase of mitosis nuclear membrane and nucleolus reappear?
 2. Chiasmata formation takes place during stage of meiosis?
 3. Chromosome movement during cell division is regulated by
 4. Chromosomes arrange on during metaphase stage.
 5. is the cancer of blood.
- Que.3(A) Answer the following questions. (any one out of two) (07)
1. Describe principle, method and application of paper chromatography.
 2. Describe recombinant DNA technology in detail.
- Que.3(B) Answer the following questions. (any one out of two) (04)
1. Describe gel electrophoresis.
 2. Write a short note on vector.
- Que.3(C) Answer the following questions. (any three out of five) (03)
1. are separated by technique of paper chromatography.
 2. In paper chromatography R_f value is
 3. Which technique separates charged particles using electric field?
 4. In recombinant DNA technology is used to joins the DNA segments to form recombinant DNA.
 5. is the best example of DNA recombinant technology.

- Que.4(A) Answer the following questions. (any one out of two) (07)
1. Describe colour blindness in detail.
 2. Describe molecular structure of gene.
- Que.4(B) Answer the following questions. (any one out of two) (04)
1. Write a short note on amniocentesis.
 2. Write a short note on ionizing radiation as a mutagens.
- Que.4(C) Answer the following questions. (any three out of five) (03)
1. Haemophilia is the best example of linked inheritance.
 2. In structural mutation the broken segment reattached to original chromosome in reverse order is known as
 3. Ultra violet and visible light are radiations.
 4. The smallest unit of gene whose mutation can produce mutant phenotype is known as
 5. Pentose sugar + Nitrogen base =
- Que.5(A) Answer the following questions. (any one out of two) (07)
1. Give a general account of DNA replication in detail.
 2. Describe translation process in detail.
- Que.5(B) Answer the following questions. (any one out of two) (04)
1. Describe the enzymes and its functions which involved in DNA replication process.
 2. Write a short note on transcription.
- Que.5(C) Answer the following questions. (any three out of five) (03)
1. is consider as a start codon.
 2. During replication of DNA okazaki fragments are formed in the direction.
 3. To initiate translation, the m-RNA first binds to
 4. What is the mode of replication in *E.coli*?
 5. Transcription occurs in
