

B.Sc. Semester - 5 (CBCS) Examination**Oct/Nov. – 2019****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. Describe the classification of Enzymes.
2. Give the classification and structure of Carbohydrates with suitable examples.

QUE-1 (B) ANSWERS THE FOLLOWING QUESTIONS. (ANY ONE OUT OF TWO) [04]

1. Give the biological importance of proteins.
2. Write a Short note on Importance of vitamins.

QUE-1 (C) ANSWERS THE FOLLOWING QUESTIONS. (ANY THREE OUT OF FIVE) [03]

1. The process of formation of glucose from non-carbohydrate sources is known as
2. A tripeptide has amino acid and peptide bonds.
3. List out the fat soluble vitamins.
4. Urea production occurs almost exclusively in
5. Those enzymes which bring about oxidation-reduction reaction between two substrate are called

QUE-2 (A) ANSWERS THE FOLLOWING QUESTIONS. (ANY ONE OUT OF TWO) [07]

1. Describe phenomenon of meiosis in detail.
2. What is cancer? Give the types of cancer and any four characteristic of cancerous cells.

QUE-2 (B) ANSWERS THE FOLLOWING QUESTIONS. (ANY ONE OUT OF TWO) [04]

1. Write a short note on microfilaments.
2. Write a short note on phenomenon of mitosis.

QUE-2 (C) ANSWERS THE FOLLOWING QUESTIONS. (ANY THREE OUT OF FIVE) [03]

1. During phase of mitosis, chromosomes arranged on equatorial plate.
2. Function of intermediate filaments.
3. prevents polymerization of microtubules.
4. Neoplastic growths of leucocytes is the characteristic of sarcomas type of cancer. Is it true or false?
5. Which type of cancer majorly seen in human?

QUE-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.

QUE-3 (B) ANSWERS THE FOLLOWING QUESTIONS. (ANY ONE OUT OF TWO) [04]

1. Write a short note on “vector”.
2. Describe the process of gel electrophoresis.

QUE-3 (C) ANSWERS THE FOLLOWING QUESTIONS. (ANY THREE OUT OF FIVE) [03]

1. Which is the best example of DNA recombinant technology?
2. Which technique separates charged particles using electric field?
3. What are the moving and stationary phases in paper chromatography?
4. An enzyme that recognizes the same sequences but cuts it differently is a neoschizomer. (True / false)
5. In process of paper chromatography, locating agent of amino acids is.....

QUE-4 (A) ANSWERS THE FOLLOWING QUESTIONS. (ANY ONE OUT OF TWO) [07]

1. Describe molecular structure of gene.
2. Describe mutagenic agents.

QUE-4 (B) ANSWERS THE FOLLOWING QUESTIONS. (ANY ONE OUT OF TWO) [04]

1. Describe Amniocentesis.
2. Describe Haemophilia with suitable examples.

QUE-4 (C) ANSWERS THE FOLLOWING QUESTIONS. (ANY THREE OUT OF FIVE) [03]

1. The most effective wave length of ultra violet for inducing mutations is about
2. A smallest unit of gene whose mutation can produce a mutant phenotype is known as.....
3. In structure of gene the smallest distance within which recombination occurs, the term called as.....
4. Pentose sugar + nitrogen base + phosphate =
5. When colorblind female marries with normal male, what will be the ratio of male and female in F1.

QUE-5 (A) ANSWERS THE FOLLOWING QUESTIONS. (ANY ONE OUT OF TWO) [07]

1. Give a general account of Transcription.
2. Describe DNA replication with suitable diagram.

QUE-5 (B) ANSWERS THE FOLLOWING QUESTIONS. (ANY ONE OUT OF TWO) [04]

1. Write a short note on Translation.
2. Write a short note on enzymes of DNA replication.

QUE-5 (C) ANSWERS THE FOLLOWING QUESTIONS. (ANY THREE OUT OF FIVE) [03]

1. What is the size of the prokaryotic ribosome?
2. Name the sequence of RNA, which is recognized by a small subunit of the ribosome.
3. What is the start codon?
4. DNA unwinding is done by
5. Polynucleotide strand whose base sequence can be copied is known as
