



BCH-003-1015019 Seat No. _____

B. Sc. (Sem. V) (CBCS) (W.E.F. 2016) Examination

August – 2021

Z - 503 : Zoology

*(Biochemistry, cytology, Instrumentation Biology, Genetics,
fundamental Process)*

(Old Course)

Faculty Code : 003

Subject Code : 1015019

Time : $2\frac{1}{2}$ Hours]

[Total Marks : 70

- Instructions :** (1) Illustrate your answers with neat and labeled diagrams.
(2) Figures to the right side indicate full marks of questions.

1 (a) Give answer of following question. (4)

1. Define Transferases enzyme.
2. Riboflavin is use as chemical name for ___ vitamin
3. What is an example of disaccharides?
4. Write name of sulfur containing amino acid.

(b) Answer the following question (2)

1. Give a brief note on negatively charged amino acid

(c) Answer the following question (3)

1. Give description of glycolysis

(d) Answer the following question (5)

1. Describe function of protein in detailed.

2 (a) Give answer of following question. (4)

- 1 Retinol chemical name is use for _____ Vitamin
- 2 Define active site
3. What is glycogenesis?
4. What is homopolysaccharides?

(b) Answer the following question (2)

1. Write a note on importance of vitamin D and vitamin K

- (C) Answer the following question (3)
 1. Write an importance of minerals (any three)
- (d) Answer the following question (5)
 1. Describe lock and key model of enzyme
- 3 (a) Give answer of following question. (4)**
 1. Write a function of Intermediate filament
 2. Define Cancer
 3. If cell stop dividing it is in _____ phase of cell cycle.
 4. What is seen the arrangement of microtubules in eukaryotic cilia?
- (b) Answer the following question (2)
 1. Give an account on significance of meiosis
- (c) Answer the following question (3)
 1. Describe characteristics of cancerous cells
- (d) Answer the following question (5)
 1. Describe structure and function of microtubule
- 4 (a) Give answer of following question. (4)**
 1. Cytoskeletal filaments are polymers of _____
 2. Micro filaments are made up of _____.
 3. Which material is used to view diakinesis?
 4. What is angiogenesis?
- (b) Answer the following question (2)
 1. Write in brief note on types of cancer
- (c) Answer the following question (3)
 1. Discuss only types of intermediate filament
- (d) Answer the following question (5)
 1. Explain only Intermediate phase of cell cycle
- 5 (a) Give answer of following question. (4)**
 1. Chromatography is use for _____.
 2. Full Name of BAC vector
 3. Define host cell.
 4. Define electrophoresis
- (b) Answer the following question (2)
 1. Restriction exonucleases.
- (c) Answer the following question (3)
 1. Explain Agarose gel electrophoresis
- (d) Answer the following question (5)
 1. Write the procedure of paper Chromatography.

- 6(a) Give answer of following question (4)**
1. Write the formula for Rf value.
 2. Which type of electrophoresis is used for detect DNA?
 3. Write a full name of YAC
 4. Write the role of DNA ligase in r DNA technology
- (b) Answer the following question (2)**
- 1 discuss method for gene transfer
- (c) Answer the following question (3)**
- 1 Describe: Plasmid
- (d) Answer the following question (5)**
- 1 Give a detail account on SDS-PAGE electrophoresis
- 7 (a) Give answer of following question. (4)**
1. Define Muton.
 2. What is promoter gene?
 3. In pedigree analysis, this \square symbol is used for _____.
 4. What is sex linked inheritance?.
- (b) Answer the following question (2)**
- 1 Discuss Y link inheritance
- (c) Answer the following question (3)**
- 1 Describe chemical mutagens
- (d) Answer the following question (5)**
- 1 Explain Duplication and inversion
- 8(a) Give answer of following question (4)**
1. Give example of radiation mutagens
 2. Which disorder occurs due to deletion?
 3. What is pedigree analysis?
 4. What is hemophilia?
- (b) Answer the following question (2)**
- 1 Give a brief note on Concept of gene
- (c) Answer the following question (3)**
- 1 Explain Haemophilia
- (d) Answer the following question (5)**
- 1 Discuss color blindness
- 9 (a) Give answer of following question. (4)**
1. Define leading stand
 2. What is genetic code?
 3. What is stop codon?
 4. Write the importance of 5' capping.

- (b) Answer the following question (2)**
1 Brief note on replication fork
- (c) Answer the following question (3)**
1 Describe termination of translation
- (d) Answer the following question (5)**
1 Describe transcription process in eukaryotic
- 10(a) Give answer of following question (4)**
1. What is Poly-A tail?
2. Write a function of DNA polymerase alpha.
3. What is start codon? The genetic code AUG is also called _____.
4. RNA polymerase I is responsible of synthesis of _____.
- (b) Answer the following question (2)**
1 Brief note on Initiation of translation
- (c) Answer the following question (3)**
1 Describe DNA topoisomerases
- (d) Answer the following question (5)**
1 Explain the mechanisms of DNA replication
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