



Seat No. \_\_\_\_\_

**HAL-003-1015019**

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

**June - 2023**

**Zoology**

*(Biochemistry, Cytology, Instrumental  
Biology Genetics, Fundamental Process)*

*(Old Course)*

**Faculty Code : 003**

**Subject Code : 1015019**

Time :  $2\frac{1}{2}$  / Total Marks : 70

**Instructions :**

- (1) Illustrate your answer with neat labelled diagram.
- (2) Figures to the right side indicate full marks of questions.

- 1 (a) Give answer of following questions : 4
- (1) Define Oxidoreductases enzyme.
  - (2) Write any two example of aldose sugar.
  - (3) Thiamine chemical name is use for \_\_\_\_\_ Vitamin.
  - (4) What is polysaccharide ?
- (b) Write any one out of two : 2
- (1) Make a note on essential amino acid.
  - (2) Write a short note on importance of iodine.
- (c) Write any one out of two : 3
- (1) Give description of glyconeogenesis.
  - (2) Describe lock and key model of enzyme action.
- (d) Write any one out of two : 5
- (1) Discuss Secondary structure of protein.
  - (2) Describe urea cycle in detail.
- 2 (a) Give answer of following questions : 4
- (1) Write a function of Intermediate filament.
  - (2) During cell cycle DNA is synthesized in \_\_\_\_\_ phase.
  - (3) Micro tubules are made up of \_\_\_\_\_ and \_\_\_\_\_.
  - (4) Write a function of microfilament.

- (b) Write any one out of two : 2  
 (1) Describe only interphase of cell cycle.  
 (2) Write in brief note on types of cancer.
- (c) Write any one out of two : 3  
 (1) Discuss only types of intermediate filament.  
 (2) Describe virus theory of carcinogenesis.
- (d) Write any one out of two : 5  
 (1) Explain mutation and theory for growth of carcinogenesis.  
 (2) Describe structure and function of microfilament.
- 3** (a) Give answer of following questions : 4  
 (1) Chromatography is used for \_\_\_\_\_  
 (2) Write the formula for Rf value.  
 (3) \_\_\_\_\_ stains are used for detect protein in electrophoresis.  
 (4) Write a full name of SDS PAGE.
- (b) Write any one out of two : 2  
 (1) Write application of chromatography.  
 (2) Describe mobile phase and stationary phase.
- (c) Write any one out of two : 3  
 (1) Describe : Bacteriophage.  
 (2) Explain Agarose gel electrophoresis.
- (d) Write any one out of two : 5  
 (1) Write the procedure of Chromatography for identification of amino acid.  
 (2) Write a step for rDNA technology.
- 4** (a) Give answer of following question : 4  
 (1) Define Muton.  
 (2) What is promoter gene ?  
 (3) Write an application of amniocentesis.  
 (4) Write the name of disorder that cause poor blood clotting/bleeding.
- (b) Write any one out of two : 2  
 (1) Discuss intron and exons.  
 (2) Explain Y linked inheritance.
- (c) Write any one out of two : 3  
 (1) Describe red-green colour blindness.  
 (2) Describe type of inversion.
- (d) Write any one out of two : 5  
 (1) Describe molecular structure of gene.  
 (2) Describe different type of mutagens.

- 5** (a) Give answer of following questions : **4**
- (1) Define leading stand.
  - (2) What is Poly-A tail ?
  - (3) Write a function of DNA polymerase alpha.
  - (4) What is RNA primer ?
- (b) Write any one out of two : **2**
- (1) Brief note on initiation of transcription in prokaryotic.
  - (2) Make a note on activation of amino acid.
- (c) Write any one out of two : **3**
- (1) Describe termination of transcription of eukaryotic.
  - (2) Describe DNA topoisomereses.
- (d) Write any one out of two : **5**
- (1) Describe translation process in eukaryotic.
  - (2) Explain the mechanisms of DNA replication.
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