



HCN-003-001535

Seat No. _____

B. Sc. (Sem. V) (CBCS) Examination

October – 2017

Zoology : Z-503

(Biochem., Cytology & Genetics)

(New Course)

Faculty Code : 003

Subject Code : 001535

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

[Total Marks : 70

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

- 1** Give the answers of following questions : **20**
- (1) Give an example of Monosaccharide. (any two)
 - (2) Give an example of fibrous Protein. (any two)
 - (3) Give the names of water soluble vitamins.
 - (4) Give the names of trace minerals. (any two)
 - (5) Paper Chromatography is used for separation of _____.
 - (6) In metacentric type of chromosomes have centromere at _____ position.
 - (7) Define : Gene
 - (8) Bary-Bary Diseases occur due to deficiency of which Vitamin ?
 - (9) Ligases are enzymes catalysing the _____ together of two molecules.

- (10) What is Cancer ?
- (11) Cry-du-chat is an example of _____ type of chromosomal syndrome.
- (12) What is pH of acidic solution ?
- (13) Transferases are enzymes _____ a group to another compound.
- (14) Give name of vitamin essential for calcium deposition in bone.
- (15) Which bond is involved in binding of two adjacent nucleotides ?
- (16) Which is the most abundant polysaccharide on Earth ?
- (17) Define : Prosthetic group
- (18) Give an example of physical mutagen.
- (19) What is meant by deletion in chromosomal mutation ?
- (20) In metaphase - I stage of meiosis Chromosomes are arranged _____ line.

2 (a) Write any three out of six :

6

- (1) Give only name of type of cancer.
- (2) Describe translocation as a type of chromosomal mutation.
- (3) Based on shape classify proteins in Short.
- (4) Give the names of phases in paper chromatography.
- (5) Briefly describe polysaccharides.
- (6) Describe pH as a mutagenic agent.

- (b) Write any three out of six : **9**
- (1) Centrifuge and Centrifugation.
 - (2) Fat soluble vitamin (any three).
 - (3) Temperature as mutagens.
 - (4) Lock and key method of Enzyme.
 - (5) DNA fingerprinting
 - (6) Hemophilia
- (c) Write any two out of five : **10**
- (1) Explain : Mitosis type of cell division.
 - (2) Gene affecting man intelligences and health.
 - (3) Secondary and tertiary structure of protein.
 - (4) Karyotype of human chromosomes.
 - (5) Theory of cancer (any two)
- 3** (a) Write any three out of six : **6**
- (1) Give character of cancerous cell.
 - (2) Isomeraes as type of enzyme.
 - (3) Inversion as a type of chromosomal mutation.
 - (4) Primary structure of protein.
 - (5) Importance of carbohydrate
 - (6) UV-light as mutagens
- (b) Write any three out of six : **9**
- (1) X-rays as a physical mutagens
 - (2) Macro minerals (any two)

- (3) Excess hair growth on Ear pinna as hereditary trait
- (4) Disaccharides
- (5) pH-meter
- (6) Anaphase-II as meiosis stage.

(c) Write any two out of five : **10**

- (1) Molecular structure of Gene
 - (2) Explain group of Amino acid based on chemical properties (any two)
 - (3) Types of Human chromosomes
 - (4) Chemical mutagens (any two)
 - (5) Amniocentesis.
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