



RP-003-001535

Seat No. _____

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

February - 2019

Zoology : Z - 503

(Biochemistry, Cytology and Genetics) (Old Course)

Faculty Code : 003

Subject Code : 001535

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

[Total Marks : 70

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

1 Answer the following questions : 20

- (1) Give any two examples of fibrous protein.
- (2) Give any two names of water soluble vitamin.
- (3) Polysaccharide are the polymers of monosaccharide and their derivatives, held together by _____.
- (4) A solution having pH = 8, the nature of solution is _____.
- (5) Which amino acid does not form an α -helix ?
- (6) Which is the most abundant protein in mammals ?
- (7) Define: Gene.
- (8) Due to lack of which vitamin, the disease scurvy occurs.
- (9) Who discovered the technique of DNA Finger printing ?
- (10) What is cancer ?
- (11) Lock and key theory of enzyme was given by _____.
- (12) Haemophilia and colour blindness is an example of _____ recessive inheritance.
- (13) Paper chromatography is used for separation of _____.
- (14) Give an example of physical mutagen.
- (15) The vitamin that is synthesized by only microorganism _____.
- (16) Which type of protein is present in hair ?
- (17) The amino acid structure of a polypeptide chain determines its _____ structure.
- (18) Give any two examples of chromoprotein.
- (19) Which technique is used to separate organelles by their density ?
- (20) Which is the most abundant polysaccharide on earth ?

- 2 (a) Write any **three** out of six. 6
- (1) Write the principle of centrifugation.
 - (2) Describe Importance of Vitamins.
 - (3) Explain Vitamin E
 - (4) What is Polypeptide ?
 - (5) Give the name of the water soluble vitamins.
 - (6) What is Co-enzymes ?
- (b) Answer any **three** out of six : 9
- (1) Describe functions of Proteins.
 - (2) Double staining technique.
 - (3) Explain Types of Cancer.
 - (4) Describe pH meter.
 - (5) Important minerals and explain it.
 - (6) Describe importance of carbohydrate.
- (c) Answer any **two** out of five : 10
- (1) Classify carbohydrates with suitable example.
 - (2) Describe structural organization of Protein.
 - (3) Types of Enzymes and factors affecting on it.
 - (4) Characteristics of cancer cells.
 - (5) Working mechanism of centrifuge.
- 3 (a) Answer any **three** out of six : 6
- (1) Explain Secondary Protein.
 - (2) Give only name of Mutagon.
 - (3) Explain Phosphorus.
 - (4) What is histone ?
 - (5) Explain Lock and key theory of Enzyme.
 - (6) Importance of Calcium in body.
- (b) Answer any **three** out of six : 9
- (1) Explain any one X linked inheritance.
 - (2) Translocation type of chromosomal mutation.
 - (3) Explain Chemicals as mutagenic agents.
 - (4) Give definition of micro-elements and macro-elements.
 - (5) Describe any five properties of amino acids.
 - (6) Translocation type of chromosomal mutation.
- (c) Answer any **two** out of five : 10
- (1) Describe Amniocentesis.
 - (2) Describe DNA Finger printing.
 - (3) Describe Paper Chromatography of ascending.
 - (4) Explain Human chromosome.
 - (5) Describe gene affecting man's intelligence and health.