



**MCR-003-001535**

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

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

**May / June - 2018**

**Z - 503 : Zoology**

**(Biochem, Cytology & Genetics)**

**(New Course)**

**Faculty Code : 003**

**Subject Code : 001535**

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

[Total Marks : 70

- Instructions :** (1) Illustrate your answer with neat and labelled diagram.
- (2) Figures to the right side indicate full marks of the questions.
- (3) All questions are compulsory.

**1** Give the answer of following questions : **20**

- (1) Give any two example of fibrous protein.
- (2) Who proposed the lock and key theory.
- (3) In bone \_\_\_\_\_ protein is found.
- (4) Which minerals is an essential for the function of body protection.
- (5) Name an organic substance found in an enzyme and it's essential for enzyme activity.
- (6) Thyroid hormone derived from \_\_\_\_\_.
- (7) Which vitamin is an important for DNA synthesis and cell division.
- (8) In Centrifugation, particulate material suspended in the liquid phase settle under the which force.
- (9) In which type of cancer the bone marrow produce immature and abnormal leucocytes.

- (10) Deficiency of which vitamin cause Scurvy.
- (11) Migration of cancerous cell from original site to other part of the body and form secondary tumors is called \_\_\_\_\_.
- (12) Write a formula of IQ.
- (13) Which minerals maintain normal excitability of heart.
- (14) Which stain is widely used in chromosomal studies.
- (15) Which technique is used for the test of hereditary or developmental defect in fetus.
- (16) Give the formula of Rf value.
- (17) Name the instrument which is used to measure the concentration of hydrogen ions.
- (18) Give an example of chemical mutagens.
- (19) In structure of gene \_\_\_\_\_ is the functional unit.
- (20) A sequence of DNA genetic code specifying a polypeptide is called \_\_\_\_\_.

**2** (A) Write any **three** out of six : **6**

- (1) What is Recon.
- (2) Define apoenzyme
- (3) Irritation theory of cancer.
- (4) Define: translocation in gene mutation.
- (5) Difference between essential and non essential amino acids.
- (6) Importance of carbohydrate.

(B) Write any **three** out of six : **9**

- (1) Duplication and deletion in chromosomal mutation.
- (2) Explain colour blindness
- (3) PH meter
- (4) Mitosis
- (5) Mutagenic agent
- (6) Water soluble vitamin any three.

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

- (1) Amniocentesis
- (2) Human chromosomes (Karyotype)
- (3) Centrifuge and Centrifugation.
- (4) Mechanisms of enzymes
- (5) Classification of carbohydrate

**3** (A) Write any **three** out of six : 6

- (1) Hormonal disturbance theory.
- (2) Importance of minerals.
- (3) Define: muton
- (4) Primary Protein
- (5) Virus theory For cancer.
- (6) What is Holoenzyme.

(B) Write any **three** out of six : 9

- (1) Describe: hemophilia
- (2) Mutation theory for cancer
- (3) Meiosis-I (Prophase).
- (4) Fat soluble vitamin any three.
- (5) Inversion in chromosomal mutation.
- (6) DNA fingerprinting.

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

- (1) Classification of protein.
- (2) Types of cancer and characteristic of cancer cells.
- (3) Factors affecting enzymes activity.
- (4) Paper chromatography.
- (5) Gene affecting Men's intelligence and health.