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SUBJECT CODE NO: - F-6143
FACULTY OF SCIENCE AND TECHNOLOGY
M.Sc. (Sem-III) (Zoology)
Examination December/January-2022-23
Fundamental Processes - 503

[Time: Three Hours]

[Max. Marks:80]

- N. B Please check whether you have got the right question paper.
- i) Part 'A' is Compulsory
 - ii) Attempt any five questions from Part 'B'
 - iii) Draw a neat labelled diagrams wherever necessary

PART-A

Q1 Attempt the following multiple choice questions-

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- 1) DNA strands are antiparallel because of _____
 - a) Disulphide bond b) Hydrogen bond c) Phosphodiester bonds d) None of these
- 2) DNA Replication is _____
 - a) Semi-conservative & semi-discontinuous
 - b) Semi-conservative & discontinuous
 - c) Conservative & semi-discontinuous
 - d) Conservative & continuous
- 3) Which of the following statements is false
 - a) The helical dimer of A-DNA is 23\AA^0
 - b) Rotation per bp- in Z-DNA is $+30.0^0$
 - c) There are 12 base pairs per turn in Z-DNA
 - d) Z-DNA left handed where as A-,B-& C- DNA are right handed
- 4) Who established that RNA is genetic material _____
 - a) Lederberg b) Holley & Nirenberg c) Griffith d) Fraenket Conrat
- 5) Most abundant RNA is a cell is _____
 - a) r-RNA b) m-RNA c) t-RNA d) Primary RNA

- 6) In three dimensional view, the molecule of t-RNA is _____
a) L-Shaped b) S-Shaped c) Y-shaped d) E-Shaped
- 7) Clover leaf model for t-RNA was proposed by _____
a) Khorana b) Lederberg c) Nirenberg d) Holley
- 8) Which of the following amino acids have only one codon?
a) valine b) Isoleucine c) Tryptophan d) Tyrosine
- 9) Telomerase is an enzyme whose macromolecular composition _____
a) Lipoprotein only b) Ribonucleoprotein
c) Ribonucleic acid only d) Protein only
- 10) Which of the following is the physical basis of heredity _____
a) DNA b) genes c) chromosomes d) DNA & proteins

PART-B

Attempt any five question following

- Q2 Explain in detail extrachromosomal replication
- Q3 Describe the r-DNA & t-RNA processing
- Q4 Comments on Amino acylation of t-RNA
- Q5 Write the concept of repression & activation of Lac operon
- Q6 Write a note on co-ordination of m-RNA processing
- Q7 Give an account of replication origin & replication fork

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