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SUBJECT CODE NO: - SS-6530
FACULTY OF SCIENCE AND TECHNOLOGY
M.Sc. (Zoology) (Sem-II)
Examination May / June - 2023
Cell and Molecular Biology-ZOO-202

[Time: 3:00 Hours]

[Max. Marks: 80]

Please check whether you have got the right question paper.

N. B

1. Question paper is divided in PART-A and PART-B.
2. PART-A is compulsory
3. Attempt any five questions from the PART-B.
4. Draw well labelled diagrams wherever necessary.

PART-A

Q1 Attempt the following multiple choice questions:

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1. The tightly packed form of DNA is called as-----
 a) Super coiling b) Compressed state c) Euchromatin d) Heterochromatin
2. When molecule receives the helical stress by twisting around itself than the phenomena is called as
 a) Coiling b) Super coiling c) Elongation d) Compression
3. Condensation of chromosome occur in -----
 a) Prophase –I b) Prophase-II c) Anaphase d) Metaphase
4. The spindle fibers are made up of -----
 a) Cellulose b) Lipids c) Pectin d) Proteins
5. The secretory proteins are synthesized by -----
 a) Free ribosomes
 b) Ribosome and endoplasmic reticulum
 c) Ribosome and nuclear membrane
 d) All of above
6. Which of the following statement is true about exocytosis?
 a) It helps in the intake of large material by the cell
 b) It occur without help of any cell organelle.
 c) It is a form of active transport
 d) It does not require energy
7. The type of coiling in DNA is -----
 a) Zig –zag b) Left handed c) Opposite d) Right handed
8. The structure of chromatin can be modified by -----
 a) Methylation b) Aceptylation c) Phosphorylation d) All of above

9. Sigma factor is component of -----
 a) DNA ligase b) DNA polymerase
 c) RNA polymerase d) Endonuclease
10. The process of modification of pre mRNA is known as -----
 a) Replication b) RNA processing c) DNA processing d) Translation

PART B

(Attempt any five)

- Q2 What is signaling? Describe in detail cell signaling 12
- Q3 Describe in detail about major protein-sorting pathway in eukaryotes. 12
- Q4 Describe in detail the replication of DNA. 12
- Q5 Differentiate the chromatin with Nucleosome 12
- Q6 Give an account on translation process in eukaryotes. 12
- Q7 Describe in detail the mRNA stability. 12
- Q8 Write notes on (any two) 12
- a) Central dogma
- b) Genome sequence
- c) Endocytosis