

B. Sc. 5th Semester Sessional Examination 2023
Sub: Zoology (Honours)
Paper: Molecular Biology
Paper Code: ZOO-HC-5016
Full Marks: 20
Time: 1 Hr

The figures in the margin indicate full marks for the questions

Q 1. Answer the following (*Any five*): 1×5=5

- a. DNA replication is semi-conservative (*True/False*)
- b. DNA Polymerase III is a (*Choose the correct one*)
 - i. DNA dependent DNA Polymerase
 - ii. DNA dependent RNA Polymerase
 - iii. RNA dependent DNA Polymerase
 - iv. RNA dependent RNA polymerase
- c. What is a transcription unit?
- d. What is a replication fork?
- e. What are the subunits and rRNAs found in Prokaryotic Ribosomes?
- f. Which enzyme is responsible for peptide bond formation during protein synthesis?

Q 2. What is the principal difference between prokaryotic and eukaryotic DNA replication? 5

Or

What is the difference between prokaryotic and eukaryotic transcription?

Q 3. Write the process of telomere synthesis in eukaryotes. 5

or

Write the process of Protein synthesis (translation) in prokaryotes.

Q 4. Write short notes on (*Any two*): 2.5×2=5

- a. Genetic Code
- b. Wobble hypothesis
- c. Eukaryotic ribosome
- d. Okazaki fragments
