2024

(FYUGP)

(5th Semester)

ZOOLOGY

(Major)

Paper Code : ZOO/C11(T)

(Molecular Biology)

Full Marks : 75

Pass Marks : 40%

Time : 3 hours

The figures in the margin indicate full marks for the questions

1. Write notes on the following : 7½×2=15

(a) Watson and Crick model of DNA

(b) RNA priming

Or

Enumerate the mechanism of DNA replication in eukaryotes with proper diagrammatic representations. 15

2. What is promoter region? Discuss the mechanism of transcription in prokaryotes with proper illustrations. 1+14=15

Or

Write notes on the following : 7½×2=15

(a) RNA polymerase and their functions

(b) RNA processing

3. What are the different elements required for translation? Discuss the process of translation in prokaryotes with suitable diagram. 5+10=15

Or

Write notes on the following : 7½×2=15

(a) Properties of genetic code

(b) Wobble hypothesis

4. Write a note on introns and exons. Discuss the process of RNA editing. 7½+7½=15

Or

Elaborate pyrimidine dimerization and mechanism of DNA mismatch repair. 5+10=15

5. What is lac operon? Discuss the principles of transcriptional regulation in prokaryotes. 2+13=15

Or

Write notes on the following : 7½×2=15

(a) Gene silencing

(b) Genetic imprinting

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