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UG/5th Sem/Zoo(H)/T/19

2019

B.Sc. (Honours)

5th Semester Examination

ZOOLOGY

Paper - C11T

[Molecular Biology]

Full Marks : 40

Time : 2 Hours

*The figures in the margin indicate full marks.  
Candidates are required to give their answers  
in their own words as far as practicable.*

1. Answer any five questions from the following :

5×2=10

- (a) What do you mean by Pribnow box ? What is co-repressor.
- (b) What is the role of RNA primer in DNA synthesis ?
- (c) Explain the role of Shine Dalgarno sequence in binding of mRNA.

[ Turn Over ]

( 2 )

- (d) Differentiate between Group I & Group II introns.
- (e) How does Kozak's sequence differ from TATA box ?
- (f) Explain the role of 5' capping in life of mRNA.
- (g) What is SOS repair mechanism ?
- (h) What is RNA editing ?

2. Answer any four questions from the following :

4×5=20

- (a) How polyadenylation events occur ? What is the function of the poly A tail ? 3+2
- (b) What are the important features of Watson-Crick Model or double helix model of DNA ?
- (c) State the role of methylation in genomic imprinting ? Is genomic imprinting permanent ? 4+1
- (d) What is Wobble effect ? State its importance. 3+2
- (e) What are the components of trp-operon ? What is catabolite repression ? 2+2

( 3 )

- (f) Explain Chargaff's rule. Differentiate nucleotide and nucleoside. 2+2

3. Answer any *one* question from the following :

1×10=10

- (a) What are the differences between Western, Southern & Northern Blot ? What are the basic steps involved in Sanger DNA sequencing ? Write down the advantages of Sanger sequencing. 3+5+2

- (b) Explain how transcription is terminated in *E. coli* ? Explain how Nucleotide Excision repair differs from Base Excision repair. 5+5
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