## CBCS/B.Sc./Hons./5th Sem./ZOOACOR11T/2023-24



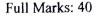




ZOOACOR11T-ZOOLOGY (CC11)

B.Sc. Honours 5th Semester Examination, 2023-24

Time Allotted: 2 Hours



 $2 \times 8 = 16$ 

The figures in the margin indicate full marks. Candidates should answer in their own words and adhere to the word limit as practicable.

Answer any eight questions from the following:

(a) What is B DNA?

(b) What do you mean by "Gene Silencing"?

(c) What is polysome?

(d) What is Pribnow box?

(e) Write the role of allolactose in Lac Operon.

(f) Explain the statement — "The Genetic Code is Degenerate".

(g) Define sense and antisense strands of DNA in view of Transcription.

- (b) Define Chargaff's rule.
- (i) What is RNA editing?
- (j) What do you mean by the term 'Replicon'?
- (k) What is Kozak's rule?

() Distinguish between leading and lagging strand in respect of DNA replication.

Ź.	Answer any <i>three</i> questions from the following:	$3 \times 3 = 9$
	(a) What is Wobble base? What is split gene?	$1\frac{1}{2}+1\frac{1}{2}$
	(b) Write a short note on Genomic Imprinting.	
	(c) State the significance of photoreactivation in DNA repair.	
	(d) Write the structure and function of E. coli RNA polymerase.	
l	(e) What do you mean by Lac Operon? Briefly describe its structure.	1+2
X.	Answer any <i>three</i> questions from the following:	5×3 = 15
	(a) What are the different steps in cDNA synthesis?	
$\checkmark$	(b) Describe Sanger's Dideoxy method to determine the nucleotide sequence of a DNA molecule.	
	(c) Describe the Rho-Dependent and Rho-Independent termination of transcription.	
$\sim$	(d) What is SOS repair? Discuss the main events that occur during the initiation phase of prokaryotic translation.	2+3
Q	(e) What is Attenuation? Why does attenuation process works in <i>E. coli</i> but not in humans? Mention the name and function of the enzymes and proteins required for prokaryotic DNA replication.	1+1+3

1