Q. P. Code: 23087

Q.P. Code:

2 ½ Hours

Total Marks: 75

1. Attempt **all** questions.
2. **All questions carry equal marks.**
3. Draw **neat labeled diagrams** wherever necessary.
4. Use of **log tables** and **non-programmable calculator is allowed.**
5. For **Q 2, Q 3 and Q 4** attempt A and B **OR** C and D.

Q 1 Do as directed (Any fifteen) **15**

1. Define: Promoter.
2. What is an enhancer?
3. What does PAP stands for?
4. CstF stands for _____
5. State True or False: RNA Pol. III is found in Nucleoplasm.
6. Define Ribozyme.
7. State True or False: In transcription RNA is synthesized in 5' to 3' direction.
8. Give significance of eukaryotic release factor in translation.
9. _____ tags protein to target it for degradation.
10. The mRNA is translated in the _____ direction, and the polypeptide is made in the _____ terminal direction.
11. Give significance of A-site in translation process.
12. The bacterial ribosome has a size of 70S and consists of two subunits of sizes _____ and _____.
13. Why is the genetic code "degenerate"?
14. What is start codon?
15. What are Hypersensitive regions?
16. Define : Protein isoforms.
17. Name the scientists who proposed the classical model of Lac operon.
18. Genes transcribed due to the action of the *N* protein are_____.
19. The induction of the Lytic Pathway is caused by _____.
20. State the function of Apo-repressor protein.

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Q 2 A	Describe Initiation of Transcription in Prokaryotes.	08
Q 2 B	Discuss the process of RNA editing by gRNA.	07
	OR	
Q 2 C	Explain the process of initiation of transcription in Eukaryotes by RNA Pol II.	08
Q 2 D	Discuss Rho dependent termination of transcription in Prokaryotes.	07
Q 3 A	Give the steps involved in elongation phase of translation. Explain any two steps in detail.	08
Q 3 B	How was the genetic code deciphered? Explain in detail.	07
	OR	
Q 3 C	Diagrammatically explain translocation of proteins into the endoplasmic reticulum of eukaryotes.	08
Q 3 D	What is amino-acylation of t-RNA? Explain the process in detail.	07
Q 4 A	Give an account of Molecular model of attenuation with reference to Tryptophan operon.	08
Q 4 B	Explain with a suitable diagram, Positive control of Lac operon	07
	OR	
Q 4 C	Discuss the regulation of Transcription Initiation by Activators.	08
Q 4 D	Schematically Represent/Explain, Production and functions of micro RNAs(mi RNAs) in post transcriptional silencing in animals.	07
Q 5	Write Short notes on any three of the following	15
a	5'end processing of eukaryotic mRNA.	
b	Wobble hypothesis.	
c	Gene Silencing at a Yeast Telomere.	
d	Coordinate Induction in Lac operon.	
e	Protein sorting and protein transportation in mitochondria.	

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