University Institute of Engineering & Technology
(Recognised Under Section 2(f) and 12B of UGC)
Kurukshetra University, Kurukshetra

THEORY EXAMINATION – JULY 2021	
B.TECH - Biotech	**SEMESTER - IV**

TIME – 4 Hrs.

M.M. - 75

PAPER – BTE-202

SUBJECT - Molecular Biology

INSTRUCTIONS TO BE FOLLOWED

- **The candidates will be required to attempt All questions in Part-A and Part-B (Compulsory Sections). Attempt any four questions from Part-C selecting at least one from each unit.**
- **Allotted time for examination is 4 hours that includes time for downloading the question paper, writing answers, scanning of answer sheets and uploading the sheets on the Attendance Sheet Cum Answer Sheet Uploading google form.**
- **The PDF files should be saved as Roll No. and Subject Code.**
- **Maximum Page Limit should be 36 (Thirty Six) for attempting the question paper on A4 sheets which could be downloaded and printed from the sample sheets given in the UIET Website.**
- **Over-attemptation should be avoided.**
- **Handwriting should be neat and clean and diagrams should be clear and contrasted.**
- **The candidate should not write their Mobile No. otherwise Unfair Means Case will be made.**
- **While attempting the paper, the candidate will use blue/black pen only.**
- **Before attempting the paper, the candidate will ensure that he/she has downloaded the correct question paper. No complaint for attempting wrong question paper by the candidate will be entertained.**
- **Candidate must ensure that he/she has put his/her signature on each page of the answer sheet used by him/her. Answer sheet without the signature of the candidate will not be evaluated.**
- **Attempt parts A, B & C separately. Do not inter-mix them. Write neatly & mention the question number clearly.**

PART-A (15 Marks)

Q. No. – 1 Answer the following questions.

(i)	What is function of Hsp 70 Chaperon system.(1)
(ii)	What is added to peptide during methylation under post translational modifications (1)
(iii)	Define TATA box. .(1)
(iv)	Name the enzyme involved in charging of tRNA before translation. .(1)
(v)	Write the function of ori site.(1)
(vi)	Why sigma factor of RNA Polymerase is important (1)
(vii)	Write the genetic codon for methionine.(1)
(viii)	Which DNA polymerase possess Proof reading activity. .(1)
(ix)	Give example s of Sn RNA molecules.(1)
(x)	Why DNA polymerase III is called as asymmetric enzyme.(1)
(xi)	Name two types of Translation termination.(1)
(xii)	Differentitate between Topoisomerase I & II (2)
(xiii)	What do you mean by wobbling hypothesis. (2)

PART-B (20 Marks)

	UNIT-I	
2	Write about the octamer of histones.	5
	UNIT-II	
3	What is the principle and procedure of DNA foot printing technique	5
	UNIT-III	
4	What is the role of attenuation in operon.	5
	UNIT-IV	
5	What are ribozymes how they help in splicing.	5

PART-C (40 Marks)

	UNIT-I	
6	Describe the process of replication in prokaryotes.	10
7	Griffins experiment proved that DNA is genetic material give the findings of his Experiment.	10
	UNIT-II	
8	Explain the steps of Transcription in prokaryotes.	10
9	Explain the process of Positive & negtive regulation in lac operon.	10
	UNIT-III	
10	Draw the diagram to explain the process of translation of Prokaryotes.	10

11	Write the characters of genetic code. How the process of translation is regulated.	10
	UNIT-IV	
12	How lariat is formed. How postranscritional modification is catalysed by Group II introns.	10
13	Explain the post transcriptional modification of various RNA species.	10