647510 **Msc1MicC0210** **Seat No :_____**

M.Sc. (Micro) Semester - 1 (*CBCS*) Examination
Jan/Feb.-2022 [OLD COURSE]
MOLECULAR BIOLOGY , GENETICS AND EVOLUTION(CORE)

Time: 1:30 Hours **Marks: 42**

Instructions:

1. Figures to the right indicate marks.
2. There are five questions in the question paper.
3. Answer any three of the following questions.

Q.1	Answer the following (*any 7*)		14
	1. What are coacervates?		
	2. Define the Mendel's 1st and 2nd law?		
	3. What is the function of helicase enzyme?		
	4. Define the aneuploidies.		
	5. What is TATA box? Define.		
	6. Write the characteristics of Z-DNA.		
	7. Define the term alleles?		
	8. What do you mean by inversion mutation?		
	9. Define stop codon.		
	10. What is DNA methylation?		
Q.2	Answer the following (any two)		14
	1. Discuss the transcription process in detail.		
	2. Write a note on genetic code and mention its importance.		
	3. Explain prokaryotic translation process.		
Q.3	Answer the following (compulsory)		14
	1. Describe the DNA replication in detail.	[5]	
	2. Write on c value paradox and mention its importance in details.	[5]	
	3. Discuss genetic linkage in detail.	[4]	
Q.4(A)	Answer the following (any two)		10
	1. Explain the basic principle of mendelian genetics.		
	2. What is contribution of Hardy–Weinberg? Explain its law in details.		
	3. Write basic principle of organic evolution.		
B.	Attempt any one		04
	1. Discuss genetic speciation in detail.		
	2. Write note on Natural selection.		
Q.5	Answer the following (any two)		14
	1. Explain chromosomal abbreviation in detail.		
	2. Write a note on chromosomal inheritance.		
	3. Describe SOS repair mechanisms.		
	4. Explain the spontaneous mutations in detail.		

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