Duration: 2 Hrs **Total marks: 40**

N.B.: 1. All questions are compulsory
2. Figures to right indicate full marks

Q.1	Answer the following Questions	**Marks**
(a)	Draw structure of two purine bases present in RNA.	**1M**
(b)	Give role of DNA Ligase enzyme in replication.	**1M**
(c)	Enlist enzymes involved in Prokaryotic replication.	**1 M**
(d)	What is DNA Polymorphism? Enlist types of SNP's.	**1 M**
(e)	Name any two inhibitors for protein synthesis.	**2 M**
(f)	Explain semiconservative replication.	**2 M**
Q.2 (a)	Explain initiation step in prokaryotic transcription.	**3 M**
	OR	
(a)	Write a note on inhibitors of transcription.	**3 M**
(b)	Write a note on Lac- Operon.	**3 M**
(c)	Explain nucleotide excision process for DNA repair.	**2 M**
Q.3 (a)	Write short note on Post translational modification.	**3 M**
(b)	Describe the initiation step in the process of prokaryotic translation.	**3 M**
	OR	
(b)	What is the role of mRNA in the process of translation? Discuss codon-anticodon recognition in brief.	**3 M**
(c)	Draw a well labelled diagram of structure of DNA.	**2 M**
Q.4 (a)	Write short note on telomerase.	**3 M**
(b)	Differentiate between prokaryotic and Eukaryotic Replication Process.	**3 M**
	OR	
(b)	Discuss the solid phase peptide synthesis in detail.	**3 M**
(c)	List the types of mutations and illustrate with suitable examples of mutagens.	**2 M**
Q.5 (a)	Define polymorphism and enlist the disease states caused by polymorphism.	**2 M**
	OR	
(a)	Mention drugs modulating DNA replication	**2 M**
(b)	Explain bi-directional replication.	**2 M**
(c)	Describe the process of mismatch repair in brief.	**2 M**
(d)	Discuss the importance of post translational modifications of proteins.	**2 M**

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