

CELL BIOLOGY AND GENETICS
Semester – II

Time Allowed : Three Hours]

[Maximum Marks : 70

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Note: The candidates are required to attempt two questions each from Section A and B carrying 12 marks each and the entire Section C consisting of 11 short answer type questions carrying 2 marks each.

Section : A		
1.	(a) Describe structure and functions of mitochondria.	8
	(b) What is deletion, give its significance ?	4
2.	Brief account of Aneuploidy and its role in evolution.	12
3.	(a) Briefly describe structure and functions of nucleus.	8
	(b) Role of autonomous DNA in plastids.	4
4.	(a) Structure of Golgi body	4
	(b) Sex Chromosomes	4
	(c) Cell Wall	4
Section : B		
5.	Describe in detail the process of DNA replication.	12
6.	What is Mendelism ? Discuss laws of segregation and independent assortment.	12
7.	(a) Give a brief account of process of transcription.	6
	(b) Short note on Protein Structure.	6
8.	(a) What are Spontaneous mutations ?	6
	(b) Genetic variations.	6
Section : C (Compulsory)		
9.	Write short notes on the following :	
	(i) Satellite DNA	(ii) Allele
	(iii) Translation	(iv) Transposable genetic elements
	(v) Significance of Meiosis	(vi) Functions of Vacuole.
	(vii) Allopolyploidy	(viii) Nucleus
	(ix) Reciprocal Inversion	(x) Nuclear Pore
	(xi) Types of Linkage	

11×2=22