B.Sc. CBCS Pattern Semester-V

012D - Botany-II (Molecular Biology -II)

P. Pages : 2 **GUG/W/23/13098**

Time : Three Hours * 5 0 9 9 * Max. Marks : 50

1.	a)	Genetic code and its salient feature.	**5**
	b)	Key experiments establishing the central Dogma (Adaptor Hypothesis)	**5**
		OR	
	c)	Discovery of m-RNA Template.	**2½**
	d)	Exceptions to Central dogma.	**2½**
	e)	Central Dogma.	**2½**
	f)	Genetic code.	**2½**
2.	a)	Transcription in eukaryotes.	**5**
	b)	Inhibitors of Transcription.	**5**
		OR	
	c)	Transcription factor.	**2½**
	d)	Lactose operon.	**2½**
	e)	Gene silencing.	**2½**
	f)	Heat shock proteins.	**2½**
3.	a)	Split genes- concept of introns and exons.	**5**
	b)	Spliceosome Machinery.	**5**
		OR	
	c)	Group I Intron splicing.	**2½**
	d)	Alternative splicing.	**2½**
	e)	Group – II Intron splicing.	**2½**
	f)	Eukaryotic mRNA processing (S' cap, 3'Poly A Tail).	**2½**
4.	a)	Ribosome structure and Assembly.	**5**
	b)	Translation in prokaryotes.	**5**

OR

c) Charging of t-RNA. **2½**

d) Aminoacyl t-RNA synthetases. **2½**

e) Translation initiation in Eukaryotes. **2½**

f) Translation Termination in Eukaryotes. **2½**

5. Write **any ten** questions in one or two lines only (diagrams are not necessary). **10**

a) Reverse Transcriptase.
b) Nonsense codon.
c) Initiation codon.
d) RNA polymerase.
e) Promoters.
f) Transcription.
g) Introns.
h) 5′ Cap.
i) 3′ poly A tail.
j) Translation.
k) Elongation.
l) Termination.

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