[59]

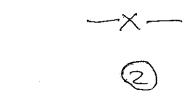
SEAT No.___

No. of Printed Pages:02

SARDAR PATEL UNIVERSITY
T.Y.B.Sc EXAMINATION, Vth Semester
Wednesday, 24th October 2018, 10.00a.m to 01.00p.m
Genetics: US05CGEN02, [Molecular and Microbial genetics]

Genetics: US05CGEN	NO2, [Mosecular and Frierowing general
	to full marks. Maximum Marks-70
NOTE- Figures in the right indicate	
NOTE- Figures in the Fight indicate Q.1. Multiple Choice Questions (10 mar	TRS- One mark to: 2
	storia genome the donor is called as
1. If the F factor attached to the back) Hfr d) F Super strain
a) F ⁺ b) F ⁻ c)) Hfr d) F Super strain
	tool by
2. Specialized transduction is mediate	c) T4 phage
a) Lytic phage	d) T7 Phage
b) Lysogenic phage	_,
3. A prophage is involved in	c) transposition d) lysogeny
a) lytic cycle b) oncogenesis c	J tansposition / / C C
. The second of	
4. Transposable element has a) specific target site	c) transposase gene
	d) all the above
b) terminal repeat	
	l in general (homologous) recombination EXCEPT:
5. ALL of the following are involved	vlase c) RecA d) RecBCD
a) Chi sequence b) Dam methy	ylase c) Recri
6. Cot value is	 e) Higher for moderate repetitive DNA.
a) Higher for repetitive DNA.	d) Higher for chromosome
b) Higher for Unique DNA.	G)8
7. DNA _i is	
 a) priming replication reaction 	
b) small DNA fragment for recom	ibination.
c) recombinant DNA for chimera	a synthesis ·
d) for the synthesis of iRNA	
8. The process in which ribosom	nes engage is: d. translocation
a) replication b. translation	on c. cell division d. translocation
• -	
9. Which of the following pairs	is not correctly described:
s of 1' - its boome with	THE HIMINS I CHAOLINGON
\sim D 1 = to containe Δ th	hat hinds OZ, branch site of farrant
c) 3' splice site: begins with	AG, marks 5 end of indion.
d) All of these are correctly	matched
10. The amino acid is the signal	ol sequence in any polypeptide chain for
a) Site for lipid addition	C) I x o c o o o
b) Glycosylation site	d) Site for its action

Q.2. Short Question (any 10 question X 2 marks each)	[20]
 Describe the cross between the F⁺ and F⁻ Discuss difference episome and plasmid. Describe the importance of phage in microbial genetic recombination. Classify the transposable element on the basis of autonomy. What is function of methyl transferase in DNA repair. Discuss the importance of Rec BCD protein in recombination. What is C-value of a genome? Describe chloroplast genome with a map. Describe the termination of eukaryotic replication. Discuss the promoter for rRNA . What is proteolytic cleavage? Describe the termination of transcription of tRNA. 	
Q.3.a. Discuss about specialized transduction with a neat diagram. Q.3.b. Describe the molecular mechanism of Transformation. OR Q.3.a. Discuss the classification of Virus with examples.	[5] [5] [5]
Q.3.b. Describe the cross between the Hfr and F	[5]
Q.4.a. Describe the Holliday model of recombination with its significance.Q.4.b. Describe the retrovirus like element with a neat map.OR	[5] [5]
Q.4.a. Describe the SOS repair mechanism for DNA. Q.4.b. Describe the transposable element of maize.	[5] [5]
Q.5.a. Describe the elongation of enkaryotic Replication.Q.5.b. Describe the mitochondrial genome for plant cell with its map.	[5] [5]
Q.5.a. Derived the equation for Cot value of the highly repetitive DNA. Q.5.b. Describe the reassociation kinetics for the unique DNA.	[5] [5]
Q.6.a Describe the splicing of group III intron with neat diagram. Q.6.b. Describe the initiation of eukaryotic translation. OR	[5] [5]
Q.6.a. Describe the initiation for mRNA transcription. Q.6.b. Describe the any five post translational modification of a protein.	[5] [5]



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