SARDAR PATEL UNIVERSTITY M.Sc (INTEGRATED) BIOTECHNOLOGY- VII SEMESTER FINAL EXAMINATION (ATKT), March - 2019

IG-IBT/EBT - 7th SEMESTER

PS07CIGIB4/PS07CIGEB4: Advanced Molecular Biology

	C 45 MT	arch 2019 TIME: 2:00 to 5.00 pm Maximum Marks:70			
Date 26th March 2019 TIME: 2:00 to 5.00 pm 1x8=					
Q.1	• -	Attempt all the questions	8		
(i)	True replication of DNA is possible due to			
		(a) Hydrogen bonding (b) Complementary base pairing rule (c) Phosphate			
	4.	backbone (d) All of these			
	(ii)	The phosphorylaiton of CTD is done by			
		(a)TFIIA (b) TFIIC (c) TFIIH (d) TFIID			
	(iii)	RNA Pol I transcribesRNA			
		(a) tRNA (b) mRNA (c) rRNA (d) sn RNA			
	(iv)	The following is not a type of alternative splicing (a) exon extended (b) intron retained (c) exon shuffling (d) exon skipped			
		(a) exon extended (b) intron retained (c) exon shows (c)			
	(v)	The secreted proteins are first targeted to (a) Endoplasmic reticulum (b) Golgi apparatus (c) Lysosome (d) Plasma			
		membrane There areisoaccepting tRNAs for Ser amino acid			
	(vi)	There areIsoaccepting trivials			
		(a) 2 (b) 4 (c) 6 (d) 8 First transposon elements were discovered in			
	(vii)	(a) Rice (b) Maize (c) Wheat (d) Pea			
	;				
	· (viii)	enzyme is required for transposition			
	(VIII)	(a) Transposase (b) Transferase (c) Esterase (d) peptidase			
			2x7=		
Q.2		Attempt any seven questions	14		
۷.2					
	(i)	Differentiate between prokaryotic and eukaryotic replication.			
	(ii)	deretand by nolymerase switching:	•		
	(iii)	Draw a schematic diagram of RAN Polymerase ii core promoter showing	ı		
	, .	binding of various transcription factors.			
	(iv)	What is splicing?			
	(v)	e at the structure of eukaryotic ribosome.	PTOT		
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	(vi) (vii) (viii) (ix)	and determines of transposable elements?	
Q.3	В А	Discuss various enzymes and proteins participating in replication process in eukaryotes.	06
	В	Explain	
		(i) the structure of DNA polymerase	06
		(ii) Exonuclease activity and its significance	
	_	OR	
	В	Explain" Eukaryotic chromosomes are replicated exactly once per cell cycle".	06
Q.4	۰.		
Q.4	Α	Enlist general transcription factors involved in initiation and elongation	
	В	phases of transcription with their function. Explain following post transcriptional modifications in detail (I) methyl capping (ii) Polyadenylation	06
	В	OR What is mediator complex? Why is it required for initiation of transcription in eukaryotes?	06
Q.5	Α	Discuss the elongation phase of translation in eukaryotes.	
1	В	Explain secondary structure of tRNA. What are the steps in tRNA charging?	06 .06
	_	OR	
	В	Discuss the translocation of proteins from cytoplasm to different sites in mitochondria.	06
Q.6	Á	Discuss P-elements of <i>Drosophila</i> in detail.	
	В	Write a note on function and regulation of :	06
		(i) p53 OR (ii) Retinoblastoma	06

