SEAT No.\_\_\_\_

No. of Printed Pages: 02

## SARDAR PATEL UNIVERSITY

## M. Sc. (Integrated) Biotechnology – Second (II) Semester Examination

Friday, 20th April, 2018

10:00a.m. to 1:00p.m.

PS02CIGB21: Cell Biology

	igures to the right indicates marks braw neat and labeled diagram, wherever neces	Total marks:	70
Q.1	Choose the most appropriate alterna	tive for the following:	(08)
1.	Which of the following is present prokaryotic cells?  a) Plasma membrane c) Nucleus	within eukaryotic cells but absent in b) Mesosomes d) Ribosome	. ,
2.	The Unit membrane model of plasma na) Benson c) Robertson	nembrane was proposed by  b) Singer d) Lenard	
3.	Cilia and flagella of eukaryotic cells ar a) Microfilament c) Intermediate filament	b) Microtubule	
4.	Golgi body of plant cells is referred as a) Protein storage bags c) Dictyosomes	b) Secretary bodies d) None of the mentioned	
5.	Which organelle is involved in cellular a) Mitochondria c) Peroxisome	respiration? b) Microbodies d) Mesosomes	
6.	The colourless plastids are known as a) Chloroplasts c) Chromoplasts	b) Leucoplasts d) Phaeoplasts	
7.	Which is the smallest phase of cell cycl a) G1phase c) G2 phase	e? b) S phase d) M phase	
8.	Crossing over occurs in meiosis during a) Prophase II c) Interphase	b) Prophase I d) Interkinesis	

Q.2		Answer in brief: Attempt any seven	(14)
	1.	Write the basic features of Prokaryotic cell.	` .
	2.	Differentiate between plant and animal cells.	
	3.	Briefly explain about osmosis.	
	4.	Briefly discuss about Intermediate filaments.	
	5.	Classify the plastids.	
	6.	Brief the process of autophagy.	
	7.	What are the similarities and differences between chloroplast and mitochondria?	
	8.	what do you mean by Amitosis? Give example.	
	9.	Which cell division is needed for the production of gamete? Why	
Q.3	(a)	Describe structure in context of Fluid Mosaic model of plasma membrane and Enlist functions of plasma membrane.	(06)
	(b)	Write a brief note on different transport mechanisms of plasma membrane.  [OR]	(06)
	(b)	What is cell theory? Describe the cell theory and explain the exceptions of cell theory.	(06)
Q.4	(a)	Describe the types, structure and functions of Endoplasmic reticulum.	(06)
	(b)	Write the basic components of cytoskeleton. Explain structure and functions of microtubules.	(06)
		[OR]	
	(b)	Write an explanatory note on Golgi complex.	(06)
Q.5	(a)	Write a note on Mitochondria in detail.	(06)
	(b)	Describe the ultrastructure of Nucleus.	(06)
	(E.)	[OR]	` ,
	(b)	Explain the types and ultrastructure of ribosomes.	(06)
Q.6	(a)	Describe mitosis with diagram.	(06)
	(b)	Write a note on cell cycle.	(06)
	0.5	[OR]	` ,
	(b)	Attempt the followings:	
		(i) Comparison between mitosis and meiosis	(03)
		(ii) Cytokinesis in animal cell and plant cell	(03)

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