

SEAT No. _____

[79/93]

Sardar Patel University
M. Sc. (I Semester) Examination
Monday, 25th March, 2019
10.00 a.m. to 1.00 p.m.
Microbiology/Biotechnology
PS01CMIC/BIT23 – Cell Biology

No. of pages: 2

Total marks: 70

- Q.1 Select the right/most appropriate answer for the following: (08 marks)
- A. Which of the following is important for secretory proteins
a. RER
b. Golgi complex
c. SER
d. Both a and b
- B. 7 TM receptors are
a. GPCR
b. RTKs
c. ABC transporters
d. All of the above
- C. Lysosomes
a. Have hydrolytic enzymes
b. Single membrane
c. Acidic pH
d. All of the above
- D. ATP synthesis in eukaryotes takes place in
a. Mitochondria
b. Chloroplast
c. Peroxisomes
d. Both a and b
- E. Biological membranes are
a. Asymmetric
b. Having both lipids and proteins
c. Selective permeable barrier
d. All of the above
- F. Proteoglycans are typically found in/as
a. Cytoskeleton
b. Nucleus
c. Extracellular matrix
d. All of the above
- G. *abl*, *C-myc* and *ras* are examples of
a. Secondary messenger
b. Mitochondrial proteins
c. Tumor suppressor genes
d. Oncogenes
- H. Plant cell walls have
a. Cellulose
b. Lignin
c. Hemicellulose
d. All of the above

(1)

(P.T.O.)

- Q.2 Answer/attempt **any seven** from the following: (14 marks)
- a. Explain passive transport.
 - b. Explain structure of eukaryotic flagella.
 - c. Give major features of a prokaryotic cell.
 - d. What is M phase?
 - e. Name different types of cancer.
 - f. What are tight junctions?
 - g. What is endocytosis?
 - h. What is the nature of insulin receptor?
 - i. What is the role of lysosomes?
- Q.3 A. Write a note on composition and role of extracellular matrix. (06 marks)
B. Explain transport of solutes through ABC transporters. (06 marks)
- OR**
- B. Discuss in detail evolution of a cell. (06 marks)
- Q.4 A. Describe organization and role of Golgi apparatus. (06 marks)
B. Discuss structure of nuclear pore. (06 marks)
- OR**
- B. Write on structure and function of mitochondria. (06 marks)
- Q.5 A. Write a note on intermediate filaments. (06 marks)
B. Discuss cell signaling using G protein coupled receptor. (06 marks)
- OR**
- B. Discuss role of microtubules. (06 marks)
- Q.6 A. Discuss extrinsic pathway of apoptosis. (06 marks)
B. Explain various phases of cell division cycle. (06 marks)
- OR**
- B. Write a note on oncogenes. (06 marks)

← X →

(2)