



**2020/TDC(CBCS)/ODD/SEM/
BTCHCC-102T/299**

**TDC (CBCS) Odd Semester Exam., 2020
held in March, 2021**

BIOTECHNOLOGY

(1st Semester)

Course No. : BTCHCC-102T

(Cell Biology)

Full Marks : 50

Pass Marks : 20

Time : 3 hours

*The figures in the margin indicate full marks
for the questions*

SECTION—A

1. Answer any ten of the following questions :

$2 \times 10 = 20$

(a) Describe the structure of the endoplasmic reticulum.

(b) What is cytosol?

(c) What is cell fractionation?

(2)



<http://www.elearninginfo.in>

- (d) What is a Golgi body?
- (e) What is a cell surface receptor?
- (f) Are glycoproteins found in biological membranes? Comment.
- (g) Name any two lipids found in membranes.
- (h) What is passive transport?
- (i) State the function of the cytoskeleton.
- (j) What are microtubules composed of?
- (k) What are vacuoles?
- (l) What is protein segregation?
- (m) What are ribosomes?
- (n) Discuss the structure of the mitochondria.
- (o) What is thylakoid membrane?
- (p) What is the function of the nucleolus?
- (q) Name any two viral carcinogens.
- (r) Name any protein found in the extracellular matrix.
- (s) What is cadherin?
- (t) What is a receptor tyrosine kinase?

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(Continued)

(3)

SECTION—B

Answer any five of the following questions : 6×5=30

2. Draw and label different components of a eukaryotic cell. Discuss compartmentalization of eukaryotic cells.
3. Discuss the technique of cell fractionation.
4. Write a note on the chemical components of biological membranes.
5. Explain how a cell membrane is involved in cell recognition.
6. Discuss the biogenesis and functions of Golgi complex.
7. Write down the roles of microtubules, microfilaments and intermediate filaments.
8. Differentiate between prokaryotic and eukaryotic ribosomes.
9. Discuss chromosomal structure. Add a note on the types of chromosomes.
10. Write about different cell adhesion molecules and their functions.
11. Write about the characteristics and molecular basis of cancer.

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