

2021/TDC/CBCS/ODD/
BTCHCC-102T/299

TDC (CBCS) Odd Semester Exam., 2021
held in March, 2022

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

Answer any ten of the following questions : 2×10=20

1. What is a nucleoid?
2. What are the components of cytosol?
3. What is a cytosolic fraction?
4. What are intrinsic membrane proteins?

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(Turn Over)

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5. What is active transport?
6. What do you mean by receptors?
7. What are intermediate filaments?
8. State the functions of cytoskeleton.
9. What is actin protein?
10. What are lysosomes?
11. What are plastids?
12. What is an acrocentric chromosome?
13. What is the role of collagen in the extracellular matrix?
14. What is carcinogenesis?
15. What is an oncogene?

SECTION—B

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

16. Discuss the classification of organisms by cell structure with suitable examples. 6
17. Discuss cell fractionation by centrifugation. 3+3=6
18. Discuss the salient features of the fluid mosaic model. 6

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19. Discuss the mechanisms of membrane transport system. 6
20. Explain the structure of the endoplasmic reticulum and its role in protein segregation. 4+2=6
21. Explain the structure of the golgi complex and its role in protein secretion. 4+2=6
22. Draw a diagram of a mitochondrion and explain its structure. Add a note on the biogenesis of mitochondria. 4+2=6
23. Discuss the structure of the nucleus with the help of a diagram. Add a note on chloroplast functions. 4+2=6
24. Explain signal transduction mediated by receptor tyrosine kinases. 6
25. Discuss the role of viruses as agents of carcinogenesis. 6
