



Reg. No. :

Name :

VI Semester B.Sc. Degree (CBCSS – Reg./Supple./Improv.)
Examination, April 2021
(2014 – 2018 Admissions)

CORE COURSE IN BOTANY/PLANT SCIENCE
6B13BOT/PLS : Cell and Molecular Biology

Time : 3 Hours

Max. Marks : 40

Answer all.

1. Blue Prints of life

- a) Cytoplasm
- b) Nucleic acid
- c) Lysosome
- d) Golgi bodies

2. Functional unit of cistron is

- a) Muton
- b) Codon
- c) Compton
- d) Replicon

3. In most of the organisms, genetic material is

- a) DNA
- b) ER
- c) Mitochondria
- d) Cytoplasm

4. Centers of cellular respiration occurs in

- a) Ribosome
- b) Mitochondria
- c) Plasma membrane
- d) Golgi bodies

(4x1=4)



SECTION – B

Answer **any eight**.

5. Describe Lac operon.
6. What are the features of genetic code ?
7. Enumerate the characters of cancer cells.
8. Write notes on plasmodesmata and its functions.
9. Describe the properties of genetic material.
10. What are the functions of plasma membrane ?
11. Describe one gene – one enzyme hypothesis.
12. Define peroxisomes. Mention their functions.
13. Differentiate between LINES and SINES.
14. Write notes on Polytene chromosome.
15. What is genetic regulation ?
16. Write notes on different forms of DNA.
17. Mention the physical properties of cytoplasm.
18. Define codon and anticodon.
19. Write notes on the significance of mitosis.
20. What are nucleic acids and nucleotides ?

(8×2=16)

SECTION – C

Answer **any four**.

21. Describe the structure and functions of Mitochondria.
22. Briefly explain Hershey – Chase experiment.



23. Write notes on mechanism involved in Transcription.
24. Describe Turners syndrome and Klinefelters syndrome. Mention the differences between them.
25. Compare Prokaryotic and Eukaryotic transcription.
26. Briefly explain the structure and functions of Lysosomes.
27. Vacuole is a central storage compartment. Substantiate this.
28. Define Mutation. Briefly explain the types of mutation.

(4×3=12)

SECTION – D

Answer **any one**.

29. Explain structural aberration of chromosomes.
30. What is Ribosomes ? Briefly explain its structure and role in protein synthesis.
31. Write an essay on transcription in prokaryotes.

(1×8=8)