

6. The proportion of nucleotides in a given nucleic acid are : Adenine 18%, Guanine 30%, Cytosine 42% and Uracil 10%. Name the nucleic acid mention the number of strands in it.
7. What is the full form of PCR ? How is it useful in biotechnology ?
8. What is GEAC and what are its objectives ?
9. What are the fermenters ?
10. What is the group of bacteria found in both the rumen of cattle and sludge of sewage treatment ?

SECTION - B

6 × 4 = 24

Note : Answer any **six** questions. Each answer may be limited to **20** lines :

11. What is meant by plasmolysis ? How is it practically useful to us ?
12. Write briefly about enzyme inhibitors.
13. Draw a neat labelled diagram of chloroplast.
14. What are the physiological processes that are regulated by ethylene in plants ?
15. Explain the chemical structure of viruses.
16. Write a brief note on chromosomal mutations and gene mutations.
17. What are the differences between DNA and RNA ?
18. What are some of the biosafety issues concerned with genetically modified crops ?

SECTION - C

2 × 8 = 16

Note : Answer any **two** questions. Each answer may be limited to **60** lines :

19. Explain the reactions of Kreb's cycle.
20. Give a brief account of the tools of recombinant DNA technology.
21. Describe the tissue culture technique and what are the advantages of tissue culture over conventional method of plant breeding in crop improvement programmes ?