

BIOLOGY

UNIT-MOLECULAR BIOLOGY

PRACTICE QUESTIONS

Questions carrying One mark each

1. Name the pentose sugar present in DNA.
2. Name the pentose sugar present in RNA.
3. Mention the names of pyrimidines of DNA.
4. Mention the names of pyrimidines of RNA
5. Mention the names of purines of DNA
6. Mention the names of purines of RNA
7. What is a nucleoside?
8. What is a nucleotide?
9. Name the unstable RNA.
10. Name the least occurring type of RNA.
11. Name the smallest RNA.
12. Name the RNA capable of carrying amino acids.
13. Name the scientist who discovered mRNA
14. Name the most abundant RNA.
15. Name the largest RNA.
16. Name the scientist who proposed the fine structure of gene.
17. Name the codon with double function.
18. Why Chargaff's rule is not applicable for RNA?
19. Why the nucleotide ratio in RNA is not usually constant?
20. Why is processed mRNA in eukaryotes is shorter than its gene?
21. Name the pentose sugar present in RNA
22. Name the pyrimidine, present in DNA, but not in RNA
23. Name the pyrimidine, present in RNA, but not in DNA
24. Name the genetic material of Eukaryotes
25. Name the process of RNA directed DNA synthesis
26. Name the enzyme, which directs DNA synthesis by RNA.
27. Why codons are redundant?
28. Why codons are sensible?
29. Why redundancy concept of genetic code does not apply to all amino acids?
30. During translation, if the codon is AUG, then,
 - a. What is the anti-codon present on the complimentary tRNA ?

31. During translation, if the codon is AUG, then,
 - a. Name the amino acid carried by this tRNA ?
32. How many amino acids are present in a nascent polypeptide decoded from mRNA with the reading frame having 1002 nucleotides?
33. Why DNA replication is called semi-conservative?
34. What are introns?
35. Name the cell organelle where protein synthesis takes place.
36. Give reason – why DNA is acidic in nature
37. Write the central dogma of life
38. Name the process by which RNA is synthesised from DNA.
39. Name the process by which Protein is synthesised from mRNA
40. Why lac operon switches off in the absence of Lactose in E.coli?

Questions carrying Two mark each

1. Mention the types of nucleotides in DNA.
2. Mention the types of nucleotides in RNA.
3. What are non-sense codons? Mention 2 of them.
4. List the different kinds of nucleotides in RNA
5. Where are the codons and anticodons

Questions carrying Five mark each

1. Explain the process of Transcription with the help of a labelled diagram.
2. Explain the Characteristics of genetic code.
3. List five differences between DNA and RNA