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Note:-

1. All Questions are compulsory.
2. Numbers on the right indicate full marks.

Section A

Q.1 Select and write the correct answer.

(4)

1. tRNA performs the function of _____.
A) carrying amino acids B) transporting message
C) copying message D) binding mRNA
2. Chargaff's rule is applicable for arrangement of nucleotides in _____.
A) DNA B) mRNA
C) tRNA D) rRNA
3. DNA fingerprinting process begins with _____.
A) isolation of DNA B) amplification
C) fragmentation D) electrophoresis
4. Phosphoric acid is linked to the pentose sugar at _____.
A) carbon 4 B) carbon 3
C) carbon 2 D) carbon 1

Q.2 Answer the following.

(3)

1. Define the term: Introns
2. Define the term: Central dogma
3. Enlist the enzymes needed for replication of DNA.

Section B
Attempt any Four

- Q.3 What is histone? **(2)**
- Q.4 Explain: Types of RNA and process of transcription **(2)**
- Q.5 Why was it said that proteins causes the variations observed within the species? **(2)**
- Q.6 If operator gene is deleted due to mutation, how will E.coli metabolize lactose? **(2)**
- Q.7 What is DNA replication? When and by which mode does it occur? **(2)**
- Q.8 Explain the terms: Gene, Cistron, Intron, Exon **(2)**

Section C
Attempt any Two

- Q.9 Why only 20 amino acids are considered as standard? **(3)**
- Q.10 What is meant by regulation of gene expression. Explain with an example. **(3)**

Q.11 Write short note on mutation.

(3)

Section D
Attempt any One

Q.12 Explain the characteristics of genetic code.

(4)

Q.13 What is genetic code? Explain the dictionary of genetic code.

(4)