

SSR Degree and PG College(A)

MSc BIOTECHNOLOGY

SEMESTER – II (MOLECULAR BIOLOGY – II)

INTERNAL - I

QUESTION BANK

MCQs

1. The central dogma was proposed by:
A) Watson
B) Crick
C) Mendel
D) Jacob
Answer: B
2. The enzyme responsible for transcription is:
A) DNA polymerase
B) RNA polymerase
C) Ligase
D) Helicase
Answer: B
3. Prokaryotic mRNA is generally:
A) Monocistronic
B) Polycistronic
C) Non-functional
D) Circular
Answer: B
4. Actinomycin D inhibits:
A) Translation
B) DNA replication
C) Transcription
D) Splicing
Answer: C
5. α -Amanitin inhibits:
A) RNA polymerase I
B) RNA polymerase II
C) DNA polymerase
D) Ribosome
Answer: B
6. The first step of transcription is:
A) Elongation
B) Termination
C) Initiation
D) Replication
Answer: C

7. Eukaryotic mRNA is usually:
A) Polycistronic
B) Monocistronic
C) Circular
D) Double-stranded
Answer: B
8. 5' capping involves addition of:
A) Adenine
B) Guanine
C) Cytosine
D) Uracil
Answer: B
9. Removal of introns is called:
A) Capping
B) Tailing
C) Splicing
D) Editing
Answer: C
10. tRNA carries:
A) DNA
B) Amino acids
C) Lipids
D) Sugars
Answer: B
11. The genetic code is:
A) Overlapping
B) Ambiguous
C) Degenerate
D) Universal only in prokaryotes
Answer: C
12. Wobble hypothesis explains:
A) DNA replication
B) Codon-anticodon pairing flexibility
C) Protein folding
D) RNA synthesis
Answer: B
13. The start codon is:
A) UAA
B) UAG
C) AUG
D) UGA
Answer: C
14. The stop codons are:
A) AUG, UGG
B) UAA, UAG, UGA
C) AAA, GGG
D) CCC, UUU
Answer: B
15. Ribosomes are made of:
A) DNA and protein

- B) RNA and protein
- C) Lipids and RNA
- D) Carbohydrates

Answer: B

16. Elongation in translation requires:

- A) ATP only
- B) GTP
- C) NADH
- D) FADH₂

Answer: B

17. Aminoglycosides inhibit:

- A) DNA synthesis
- B) Protein synthesis
- C) Lipid metabolism
- D) Transcription

Answer: B

18. Post-translational modification includes:

- A) Replication
- B) Glycosylation
- C) Transcription
- D) Translation

Answer: B

19. The anticodon is present on:

- A) mRNA
- B) tRNA
- C) rRNA
- D) DNA

Answer: B

20. Translation occurs in:

- A) Nucleus
- B) Ribosome
- C) Golgi body
- D) Lysosome

Answer: B

Fill in the Blanks

1. The central dogma explains flow of information from DNA to _____.
Answer: Protein
2. Transcription is synthesis of _____ from DNA.
Answer: RNA
3. RNA polymerase synthesizes RNA in _____ direction.
Answer: 5' to 3'
4. Prokaryotic mRNA is _____ cistronic.
Answer: Poly
5. Actinomycin D inhibits _____.
Answer: Transcription
6. α -Amanitin inhibits RNA polymerase _____.
Answer: II
7. The first stage of transcription is _____.
Answer: Initiation
8. Eukaryotic mRNA undergoes _____ modification at 5' end.
Answer: Capping
9. Poly-A tail is added at the _____ end.
Answer: 3'
10. Introns are removed by _____.
Answer: Splicing
11. tRNA carries _____ to ribosome.
Answer: Amino acids
12. The genetic code is _____ (one codon codes for one amino acid).
Answer: Unambiguous
13. The start codon is _____.
Answer: AUG
14. Stop codons do not code for _____.
Answer: Amino acids
15. Ribosomes consist of rRNA and _____.
Answer: Proteins
16. Translation requires energy in the form of _____.
Answer: GTP
17. Wobble occurs at the _____ position of codon.
Answer: Third
18. Aminoglycosides inhibit _____ synthesis.
Answer: Protein
19. Glycosylation is a _____ translational modification.
Answer: Post
20. Translation takes place in the _____.
Answer: Cytoplasm