



LAWRENCE HIGH SCHOOL



A JESUIT CHRISTIAN MINORITY INSTITUTION

SOLUTION – 38

Class: XII

Sub: Biological Science

Date: 15.08.2020

Topic: Ch 6 (part 7) Protein Synthesis - Transcription

F.M. : 15

Choose the correct option:

(1x15=15)

1. Who proposed that genes operate through enzyme?

- a) Garrod b) Boveri c) Morgan d) Okazaki

Answer : Garrod (a)

2. Garrod studied _____ disease to propose the hypothesis that genes operate through enzymes.

- a) Phenylketonuria b) Alkaptonuria c) Colour blindness d) Haemophilia

Answer : Alkaptonuria (b)

3. One gene one enzyme hypothesis was proposed by :-

- a) Khorana b) Kornberg c) Beadle and Tatum d) Garrod

Answer : Beadle and Tatum (c)

4. The process of copying genetic information from template strand of the DNA to RNA is called :-

- a) Protein synthesis b) Transcription c) Replication d) Translation

Answer : Transcription (b)

5. The transcription unit consists of :-

- a) Promoter b) Structural gene c) Terminator d) All of these

Answer : All of these (d)

6. By connection 5'→3' DNA strand is called :-

- a) Template Strand b) Coding strand c) Non-coding d) None of these

Answer : Coding strand (b)

7. The terminator region is present on :-

- a) Upstream of structural genes b) Downstream of structural gene c) Within the structural gene d) All of these

Answer : Downstream of structural gene (b)

8. The chief enzyme for transcription is :-

- a) DNA Pol b) DNA independent RNA polymerase c) DNA dependent RNA polymerase d) DNA ligase

Answer : DNA dependent RNA Polymerase (b)

9. In prokaryotes RNA pol enzyme has _____ subunits.
a) 2 b) 7 c) 8 d) 5
Answer : 5 (c)
10. The _____ factor recognizes the promoter region on the DNA.
a) Sigma b) Alpha c) Beta d) Gamma
Answer : Sigma (a)
11. The enzyme _____ is required to activate the ribonucleotides.
a) Phosphatase b) Phosphorylase c) RNA Pol I d) All of these
Answer : Phosphorylase (b)
12. The hydrolysis of the pyrophosphate bond in a ribonucleotide takes place by :-
a) Phosphorylase b) Pyrophosphatase c) Phosphatase d) None of these
Answer : Pyrophosphatase (b)
13. As the RNA chain formation initiates the _____ factor of prokaryotic RNA pol separates.
a) Alpha b) Sigma c) Beta d) Delta
Answer : Sigma (b)
14. For RNA synthesis to stop following is required :-
a) Terminator b) Rho factor c) Sigma factor d) Both (a) and (b)
Answer : Both (a) and (b)(d)
15. After the termination of transcription following occurs.
a) Release of primary transcript b) DNA duplex formation c) Post transcriptional of RNA d) All of these
Answer : All of these (d)

Shaista Ahmed