LAWRENCE HIGH SCHOOL

A JESUIT CHRISTIAN MINORITY INSTITUTION

SOLUTION – 37

Class: XII Sub: Biological Science Date: 10.08.2020

Topic: Chapter 6 (Part 6) Mechanism of DNA replication

F.M. : 15

Choose the correct option: (1x15=15)

1. The starting point where DNA replication begins is called :-
   a)Origin b)Start Signal c) Origin of replication d) None of these
   Answer : Origin of replication (c)
2. The enzyme which unzips the two strands of DNA by destroying hydrogen bonds is :-
   a)Helicase b) Topisomerase c) SSBP d) DNA
   Answer : Helicase (a)
3. The synthesis of new DNA stand takes place in the following direction :-
   a) 5'→ 3' b) 3'→5' c) Both 3'→ 5' and 5'→ 3' d) All of these
   Answer : Both 3'→ 5' and 5'→ 3' (c)
4. The primer for DNA replication is chemically made up of :-
   a)DNA b) RNA c) Proteins d) None of these
   Answer : RNA (b)
5. The enzyme used for synthesize of primer is :-
   a) Primase b) Helicase c) Gyrase d) DNA pol
   Answer : Primase (a)
6. The DNA polymerase enzyme which has 3'→ 5' exonuclease activity is :-
   a) Pol I b) Pol II c) Pol III d) All of these
   Answer : All of these (d)
7. The major repair enzyme is :-
   a) DNA pol I b) DNA pol II c) DNA pol III d) DNA ligase
   Answer : DNA pol I (a)
8. The process of lining up deoxyribonucleotides opposite to the nitrogen base is called :-
   a) Base joining b)Base pairing c) Chain formation d) All of these
   Answer : Base pairing (b)
9. The process of sequential opening of DNA double chain and its replication to form two chains is called :-
   a) Chain formation b)Base pairing c) Zipper duplication d) None of these
   Answer : Zipper duplication (c)

10. The stand which is continuously synthesized is called :-
    a) Leader strand b) Leading strand c) Lagging strand d) All of these
    Answer : Leading strand (b)
11. The discontinuous strands of DNA synthesized are called :-
    a) Zipper fragments b) Lagging strand c) Okazaki fragments d) None of these
    Answer : Okazaki fragments (c)
12. The enzymes which going up the Okazaki fragments is :-
    a) DNA pol I b) DNA pol II c) DNA pol III d) DNA ligase
    Answer : DNA ligase (d)
13. Proof reading and mutations due to mismatching is taken care of by the following enzyme :-
    a) DNA pol II b) DNA pol I c) DNA pol III d) DNA ligase
    Answer : DNA Pol I (a)
14. Characteristic of lagging stand :-
    a)Consists of okazaki fragments b) Template opens at 5'→3' direction c) Okazaki fragments are joined by DNA ligase d) All of these
    Answer : All of these (d)
15. The activation of deoxyribonucleotides is required for DNA replication because :-
    a) Deoxyribonucleotides are the building blocks b) Provide energy c) Act as enzyme d) Both (a) and (b)
    Answer : Both (a) and (b)

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