

Unit 8 - Week 6 :

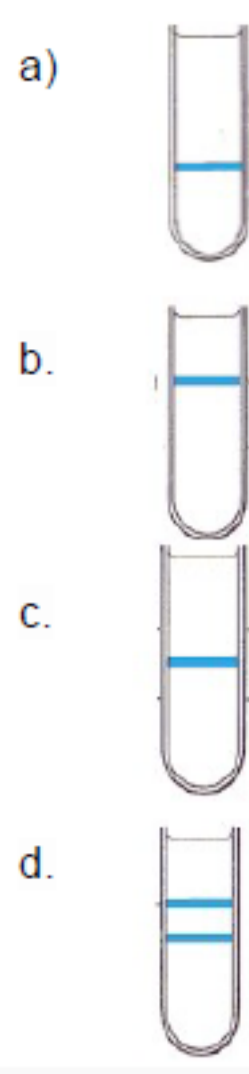
Course outline
How to access the portal?
Week 0 Assignment 0
Week 1 :
Week 2 :
Week 3 :
Week 4 :
Week 5 :
Week 6 :
<ul style="list-style-type: none"> Lecture 27 : Synthesis of oligonucleotide Lecture 28 : Central dogma: DNA replication, transcription and translation Lecture 29 : Central dogma: DNA replication, transcription and translation (Contd.) Lecture 30 : Central dogma: DNA replication, transcription and translation (Contd.) Lecture 31 : Central dogma: DNA replication, transcription and translation (Contd.) Lecture 32 : Central dogma: DNA replication, transcription and translation (Contd.)
<input type="radio"/> Quiz : Assignment 6 <input type="radio"/> Feedback for Week 6
Week 7 :
Week 8 :
Week 9 :
Week 10 :
Week 11 :
Week 12 :
DOWNLOAD VIDEOS
Assignment Solution
Text Transcripts
Live Session

Assignment 6

The due date for submitting this assignment has passed.
As per our records you have not submitted this assignment.

Due on 2019-09-11, 23:59 IST.

1) The colonies of E. coli grown in $^{15}\text{NH}_4\text{Cl}$ medium are transferred to a medium having $^{14}\text{NH}_4\text{Cl}$ as nitrogen source. The DNA isolated after two cycles of growth was subjected to density gradient centrifugation. Which of the following figures represent the correct analysis of the result? 1 point



- a
 b
 c
 d

No, the answer is incorrect.
Score: 0

Accepted Answers:
d

2) The reaction in DNA replication catalyzed by DNA ligase involves 1 point

- addition of new nucleotides to the leading strand
- addition of new nucleotide to the lagging strand
- formation of a phosphodiester bond between the 3'-OH of one Okazaki fragment and the 5'-phosphate of the next on the lagging strand
- base pairing of the template and the newly formed DNA strand

- a
 b
 c
 d

No, the answer is incorrect.
Score: 0

Accepted Answers:
c

3) Which of the following is TRUE about DNA polymerase? 1 point

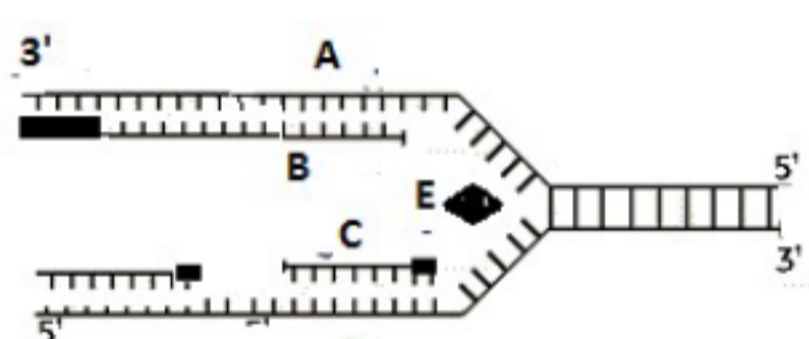
- It can synthesize DNA in the 5' to 3' direction
- It can synthesize DNA in the 3' to 5' direction
- It can synthesize mRNA in the 3' to 5' direction
- It can synthesize mRNA in the 5' to 3' direction

- a
 b
 c
 d

No, the answer is incorrect.
Score: 0

Accepted Answers:
a

Consider the following diagram depicting the process of DNA replication at a replication fork and answer the questions 4-6



4) The strand labeled B is the 1 point

- lagging strand
- leading strand
- Okazaki fragment
- RNA primer

- a
 b
 c
 d

No, the answer is incorrect.
Score: 0

Accepted Answers:
b

5) The strand labeled D is the: 1 point

- coding strand
- parental DNA
- leading strand
- lagging strand

- a
 b
 c
 d

No, the answer is incorrect.
Score: 0

Accepted Answers:
d

6) The black parallelogram functions as 1 point

- Ligase
- Helicase
- Topoisomerase
- Hexonuclease

- a
 b
 c
 d

No, the answer is incorrect.
Score: 0

Accepted Answers:
b

7) Which of the following is responsible for the initiation of RNA polymerase activity in a bacterial strain? 1 point

- initiation site
- promoter region
- sigma factor
- rho factor

- a
 b
 c
 d

No, the answer is incorrect.
Score: 0

Accepted Answers:
c

8) Which of the following is a stop codon? 1 point

- 5'-AUG-3'
- 5'-GUG-3'
- 3'-UAA-5'
- 3'-AAU-5'

- a
 b
 c
 d

No, the answer is incorrect.
Score: 0

Accepted Answers:
d

9) Name the RNA molecule which is used to carry genetic information copied from DNA? 1 point

- tRNA
- mRNA
- rRNA
- snRNA

- a
 b
 c
 d

No, the answer is incorrect.
Score: 0

Accepted Answers:
b

10) Which of the following transcription termination technique has RNA dependent ATPase activity? 1 point

- Intercalating agents
- Rho dependent
- Rho independent
- Rifamocin

- a
 b
 c
 d

No, the answer is incorrect.
Score: 0

Accepted Answers:
b

11) What would be the complementary RNA strand for the following DNA sequence in transcription process? 1 point

DNA sequence: 5'-GCGTATG-3'

- 3'-CGCAUAC-5'
- 5'-GCGUAUG-3'
- 3'-GCGUAUG-5'
- 5'-CGCAUAC-3'

- a
 b
 c
 d

No, the answer is incorrect.
Score: 0

Accepted Answers:
b

12) In the chemical synthesis of DNA, 5'-OH is protected and deprotected by: 1 point

- dimethoxytrityl (DMT) group and ammonia
- benzoyl group and ammonia
- benzoyl group and tetrazole
- dimethoxytrityl (DMT) group and dichloroacetic acid

- a
 b
 c
 d

No, the answer is incorrect.
Score: 0

Accepted Answers:
d

13) In the chemical synthesis of DNA, Which of the following base does not need any protection? 1 point

- Adenine
- Guanine
- Cytosine
- Thymine

- a
 b
 c
 d

No, the answer is incorrect.
Score: 0

Accepted Answers:
d