← PW DNA Replication & Protein Synthesis Test

14 Matching Questions

1. ☐ transcription
2. ☐ anticodon
3. ☐ termination signal
4. ☐ nitrogenous base
5. ☐ base sequence
6. ☐ genetic code
7. ☐ pyrimidine
8. ☐ genome
9. ☐ translation
10. ☐ thymine dimers
11. ☐ ribonucleic acid
12. ☐ replication fork
13. ☐ DNA replication
14. ☐ ribosomal RNA

a The ordering of nucleotides in DNA molecules that carries the genetic information in living cells

b A sequence of three bases of a tRNA molecule that pairs with the complementary three-nucleotide codon of an mRNA molecule during protein synthesis.

c The type of RNA that makes up the major part of ribosomes

d The organic process whereby the DNA sequence in a gene is copied into mRNA

e A nitrogenous base that has a single-ring structure; one of the two general categories of nitrogenous bases found in DNA and RNA

f An organic base that contains nitrogen; a subunit of a nucleotide in DNA and RNA

g A Y-shaped region on a replicating DNA molecule where new strands are growing.

h The order of nitrogenous bases on a chain of DNA

i A single-stranded nucleic acid that contains the sugar ribose

j The process of making a copy of DNA

k A bond formed by two thymines in

DNA; caused by UV light; results in mutation or death of a cell

l The complete genetic material contained in an individual

m A specific sequence of nucleotides that marks the end of a gene

n The process whereby genetic information coded in messenger RNA directs the formation of a specific protein at a ribosome in the cytoplasm

14 Multiple Choice Questions

1. Uses energy from visible light to reverse damage of thymine dimers
   a. ⊙ helicase
   b. ○ promoter
   c. ○ ribose
   d. ○ photolyase

2. An enzyme involved in DNA replication that joins individual nucleotides to produce a DNA molecule
   a. ⊙ photolyase
   b. ○ DNA polymerase
   c. ○ RNA polymerase
   d. ○ deoxyribose

3. A change in the nucleotide-base sequence of a gene or DNA molecule
   a. ⊙ mutation
   b. ○ purine
   c. ○ codon
   d. ○ translation

4. A nucleotide sequence on a DNA molecule to which an RNA polymerase molecule binds, which initiates the transcription of a specific gene
   a. ⊙ promoter
   b. ○ ribose
   c. ○ codon
   d. ○ genome

5. The formation of proteins by using information contained in DNA and carried

by mRNA

a. ⊙ protein synthesis
b. ○ photolyase
c. ○ ribose
d. ○ promoter

6. The three-nucleotide sequence on messenger RNA that codes for a single amino acid

a. ⊙ ribose
b. ○ genome
c. ○ codon
d. ○ anticodon

7. A five-carbon sugar present in RNA

a. ⊙ purine
b. ○ ribose
c. ○ helicase
d. ○ genome

8. An enzyme that untwists the double helix of DNA at the replication forks.

a. ⊙ purine
b. ○ helicase
c. ○ genome
d. ○ ribose

9. A monomer of nucleic acids made up of a 5-carbon sugar, a phosphate group, and a nitrogenous base

a. ⊙ codon
b. ○ nucleotide
c. ○ purine
d. ○ mutation

10. RNA molecule that carries copies of instructions for the assembly of amino acids into proteins from DNA to the rest of the cell

a. ⊙ messenger RNA
b. ○ base sequence
c. ○ ribosomal RNA
d. ○ transfer RNA

11. An enzyme that adds and links complementary RNA nucleotides on the DNA

template during transcription

a. ⊙ RNA polymerase
b. ○ photolyase
c. ○ deoxyribose
d. ○ DNA polymerase

12. A five-carbon sugar that is a component of DNA nucleotides

a. ⊙ purine
b. ○ helicase
c. ○ ribose
d. ○ deoxyribose

13. The type of RNA molecule that transfers amino acids to ribosomes during protein synthesis

a. ⊙ transfer RNA
b. ○ ribosomal RNA
c. ○ messenger RNA
d. ○ translation

14. A nitrogenous base that has a double-ring structure; one of the two general categories of nitrogenous bases found in DNA and RNA

a. ⊙ purine
b. ○ codon
c. ○ ribose
d. ○ pyrimidine

Check Answers