

# Assessment

**Biology: Chapter 6**



**DNA strands condense in a final shape called \_\_\_\_\_.**

**A. Chromosome**

**C. RNA**

**D. Nucleotide**

**C. Gene**

**Nucleic acids (DNA or RNA) are composed of**

- A. Nucleotides**
- B. Sugar**
- C. Proteins**
- D. Fat and glycerol**

**DNA information is transcribed into \_\_\_\_\_.**

- A. Nucleic acid**
- B. Single-strand RNA**
- C. Amino acids**
- D. Double-strand DNA**

**Which one of the following base is found in RNA but not DNA?**

- A. Cytosine**
- B. Adenine**
- C. Uracil**
- D. Thymine**

The process of copying a gene's DNA sequence into a sequence of RNA is called \_\_\_\_\_.

- A. Replication.
- B. Translation
- C. Transcription
- D. Operation

**Transcription and translation of a gene composed of 30 nucleotides would form a protein containing no more than \_\_\_\_\_ amino acids.**

**A. 10**

**B. 30**

**C. 60**

**D. 90**

**A DNA strand with the sequence AACGTAACG is transcribed. What is the sequence of the mRNA molecule synthesized?**

- A. AACGTAACG**
- B. UUGCAUUGC**
- C. AACGUAACG**
- D. TTGCATTGC**



## Question 8

The sugar in RNA is \_\_\_\_\_ , the sugar in DNA is \_\_\_\_\_.

A. deoxyribose, ribose

B. ribose, deoxyribose

C. ribose, dextrose

D. ribose, glucose

**How many different amino acids are there?**

- A. 3**
- B. 12**
- C. 20**
- D. 100**

**Each nucleotide in a DNA molecule consists of \_\_\_\_\_.**

- A. a phosphate group, a hexose sugar and a nitrogenous base.**
- B. a sulfonyl group, a pentose sugar, and a nitrogenous base.**
- C. a phosphate group, a pentose sugar and a nitrogenous base.**
- D. a phosphate group, glucose , and a nitrogenous base.**

is a complex of DNA and proteins necessary for chromosomal organization

**A. Chromatin**

**B. Gene**

**C. Nucleosome**

**D. Chromosome**

The inheritable genetic information contained in the DNA is called \_\_\_\_\_:

- A. Genotype
- B. Phenotype
- C. biotype
- D. Antitype

**Which of the following is a purine?**

**A. Cytosine**

**B. Adenine**

**C. Uracil**

**D. Thymine**

The products of translation is\_\_\_\_\_.

- A. t- RNA
- B. Protein
- C. r-RNA
- D. m-RNA

**The nucleolus is the site of synthesis for**

- A. Proteins**
- B. DNA**
- C. rRNA**
- D. all of the above**



**A codon consists of \_\_\_\_\_ nucleotides.**

**A. 2**

**B. 3**

**C. 4**

**D. 6**

**During translation, a nucleotide sequence is converted into an \_\_\_\_\_.**

- A. Monosaccharide sequence**
- B. Amino acid sequence**
- C. Fatty acids sequence**
- D. Nucleic acids sequence**

The \_\_\_\_\_ adds nucleotides to the new DNA chain.

- A. DNA ligase
- B. m-RNA
- C. t-RNA
- D. DNA polymerase

**In which of the following pairs, bases are complementary?**

**A. C-G**

**B. A-G**

**C. A-C**

**D. G-T**

The codon is found on \_\_\_\_\_, and the anticodon is found on \_\_\_\_\_.

- A. tRNA, mRNA
- B. rRNA, mRNA
- C. mRNA, tRNA
- D. mRNA, rRNA

## **Nucleic acids**

- A. are also called nucleotides**
- B. do not contain purine**
- C. are polymers**
- D. do not contain uracil**

**A stretch of chromosome that codes for a trait can be called a \_\_\_\_\_.**

- A. Chromatin**
- B. Gene**
- C. Chromatid**
- D. Histone**

**DNA replication results in:**

- A. 2 completely new DNA molecules**
- B. 1 new molecule of RNA**
- C. 1 new DNA molecule, 1 old molecule is conserved**
- D. 2 DNA molecules that each contain a strand of the original**



**DNA replication follows a \_\_\_\_\_ model.**

- A. Conservative**
- B. Semi-Conservative**
- C. Parallel**
- D. Dispersive**

**The two polynucleotide chains in DNA are:**

- A. Antiparallel**
- B. Semi-conservative**
- C. Parallel**
- D. Discontinuous**

**Which of the following are pyrimidines?**

- A. adenine and cytosine**
- B. adenine and guanine**
- C. cytosine and guanine**
- D. cytosine and thymine**

**Chromatin is a complex of**

- A. DNA and protein**
- B. RNA with protein**
- C. Only DNA**
- D. DNA and fat**

The enzyme \_\_\_\_\_ unwinds the DNA molecule.

- A. DNA polymerase
- B. Ligase
- C. Helicase
- D. Primase



**The Product of translation is:**

- A. Polysaccharide**
- B. mRNA**
- C. Polypeptide chain**
- D. Polynucleotide chain**

# ANSWERS

1. A
2. A
3. B
4. C
5. C
6. A
7. B
8. B
9. C
10. C

11. A
12. A
13. B
14. B
15. C
16. B
17. B
18. D
19. A
20. C

21. C
22. B
23. D
24. B
25. A
26. D
27. A
28. C
29. B
30. C