



Answer all the questions below then check your answers

1. True or False: The backbone of a DNA strand is made of alternating sugar and phosphate groups.

2. Which base pairs with adenine (A) in DNA?

- (a) Cytosine (C)      (b) Guanine (G)      (c) Thymine (T)      (d) Uracil (U)

3. Fill in the gaps to complete the sentence below:

A nucleotide consists of a \_\_\_\_\_, a \_\_\_\_\_, and an amine \_\_\_\_\_

4. What is the sugar found in DNA?

- A) Ribose      B) Glucose      C) Deoxyribose      D) Fructose

Fill in the Gaps to complete the sentence below:

5. The two strands of DNA are held together by weak \_\_\_\_\_ bonds between complementary bases.

6. What is the shape of a DNA polymer?

7. Which base pairs with guanine in DNA?

A) Cytosine      B) Thymine      C) Guanine      D) Uracil

8. Fill in the Gaps to complete the sentence below:

DNA is composed of two long strands of \_\_\_\_\_ that coil around each other to form a \_\_\_\_\_. The strands are made up of repeating units called \_\_\_\_\_.

9. Explain the structure of a nucleotide and how nucleotides are linked together to form a DNA strand.

## Answers

1. True or False: The backbone of a DNA strand is made of alternating sugar and phosphate groups.

Answer: True

2. Which base pairs with adenine (A) in DNA?

(a) Cytosine (C)      (b) Guanine (G)      (c) Thymine (T)      (d) Uracil (U)

Answer: (c) Thymine (T)

3. Fill in the gaps to complete the sentence below:

A nucleotide consists of a \_\_\_\_\_, a \_\_\_\_\_, and an amine \_\_\_\_\_.

Answer: sugar, phosphate, base

4. What is the sugar found in DNA?

A) Ribose      B) Glucose      C) Deoxyribose      D) Fructose

Answer: C) Deoxyribose

Fill in the Gaps to complete the sentence below:

5. The two strands of DNA are held together by weak \_\_\_\_\_ bonds between complementary bases.

Answer: intermolecular

6. What is the shape of a DNA polymer?

Answer: Double helix

7. Which base pairs with guanine in DNA?

A) Cytosine      B) Thymine      C) Guanine      D) Uracil

Answer: A) cytosine

8. Fill in the Gaps to complete the sentence below:

DNA is composed of two long strands of \_\_\_\_\_ that coil around each other to form a \_\_\_\_\_. The strands are made up of repeating units called \_\_\_\_\_.

Answer: nucleotides, double helix, nucleotides

9. Explain the structure of a nucleotide and how nucleotides are linked together to form a DNA strand.

Answer: A nucleotide consists of three components: a phosphate group, a deoxyribose sugar, and an amine base. Nucleotides are linked together by covalent bonds between the phosphate group of one nucleotide and the sugar of the next nucleotide, forming a sugar-phosphate backbone. The bases extend from this backbone across the DNA strands and participate in base pairing, that is they are attracted to another base on the complimentary strand by weak intermolecular bonding.