



Name \_\_\_\_\_ Class \_\_\_\_\_ Date \_\_\_\_\_

1 The **structure and location** of a cellular component is represented in the diagram below. The **polymer in the diagram most likely contains**

**A** adenosine triphosphate  
**B** lipids  
**C** genes  
**D** hydrolytic enzymes

2 In a portion of a gene, the nitrogenous base sequence is **T-C-G-A-A-T**. Which **nitrogenous base sequence** would normally be found bonded to this section of the gene?

**A** A-C-G-T-A-A  
**B** A-C-G-U-U-A  
**C** A-G-C-T-T-A  
**D** U-G-C-A-A-U

3 If an adenine nucleotide is **deleted from a nucleotide sequence** in a DNA molecule, the result is a

**A** clone  
**B** mutation  
**C** polypeptide  
**D** ...

4 A general equation for a chemical reaction is shown below.

**polypeptide + water**  $\xrightarrow{\text{A}}$  **amino acids**

Which substance is represented by letter **A**?

**A** amylase      **C** protease

5

**PREVIEW**

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7

**B** cancer cells  
**C** nerve cells  
**D** cells that are unable to reproduce

**C** the number of genes found in the nucleus  
**D** the number of chromosomes in the cell

9 Molecules **C, D,** and **E** will **combine** to form part of

**A** a polypeptide  
**B** a polysaccharide  
**C** DNA  
**D** RNA

10 Structure **B** represents a **molecule** of

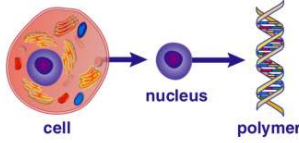
**A** nuclear DNA  
**B** cytoplasmic DNA  
**C** ribosomal RNA  
**D** transfer RNA



## ANSWER KEY

The **structure and location** of a cellular component is represented in the diagram below. The **polymer in the diagram most likely contains**

- A** adenosine triphosphate
- B** lipids
- C** genes
- D** hydrolytic enzymes



(C)

In a portion of a gene, the nitrogenous base sequence is **T-C-G-A-A-T**. Which **nitrogenous base sequence** would normally be found bonded to this section of the gene?

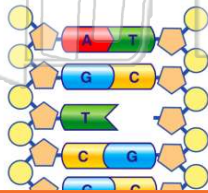
- A** A-C-G-T-A-A
- B** A-C-G-U-U-A
- C** A-G-C-T-T-A
- D** U-G-C-A-A-U



(C)

If an adenine nucleotide is **deleted from a nucleotide sequence** in a DNA molecule, the result is a

- A** clone
- B** mutation
- C** polypeptide
- D** hybrid



(b)

A general equation for a chemical reaction is shown below.



Which substance is represented by letter **A**?

- A** amylase
- B** lipase
- C** protease
- D** maltase

(C)



## PREVIEW

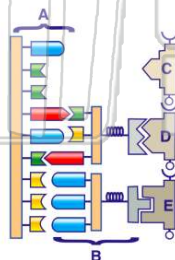
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- C** nerve cells
- D** cells that are unable to reproduce

- nucleus
- D** the number of chromosomes in the cell

Molecules **C**, **D**, and **E** will **combine** to form part of

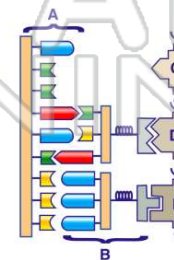
- A** a polypeptide
- B** a polysaccharide
- C** DNA
- D** RNA



(a)

Structure **B** represents a **molecule** of

- A** nuclear DNA
- B** cytoplasmic DNA
- C** ribosomal RNA
- D** transfer RNA



(d)