

# Example Items

## Biology Pre-AP

**Biology Pre-AP Example Items** are a **representative set** of items for the ACP. Teachers may use this set of items along with the test blueprint as guides to prepare students for the ACP. On the last page, the correct answer, content SE and SE justification are listed for each item.

*The specific part of an SE that an Example Item measures is **NOT** necessarily the only part of the SE that is assessed on the ACP.* None of these Example Items will appear on the ACP.

Teachers may provide feedback regarding Example Items.

(1) Download the [Example Feedback Form](#) and email it. The form is located on the homepage of [Assessment.dallasisd.org](http://Assessment.dallasisd.org).

OR

(2) To submit directly, click “Example Feedback” **after** you login to the [Assessment website](#).

First Semester

2018–2019

Code #: 3191





## EXAMPLE ITEMS Biology Pre-AP, Sem 1

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**5** To maintain homeostasis, cells absorb and excrete substances through the phospholipid bilayer of the cell membrane. In which process do cells use vesicles to excrete substances?

- A** Facilitated diffusion
- B** Endocytosis
- C** Exocytosis
- D** Simple diffusion



**Use the diagram to answer the next question.**

**6** Components of DNA include a phosphate backbone and base pairs connected by a —

- A** hydrogen bond
- B** carbon bond
- C** nitrogen bond
- D** phosphate bond

**7** Which statement is incorrect?

- A** Some molecules diffuse through transport proteins.
- B** Molecule transport across a membrane can occur through endocytosis or exocytosis.
- C** Osmosis is a type of passive transport and requires no energy input from the cell.
- D** An isotonic solution has a higher concentration of dissolved particles than the cell.

## EXAMPLE ITEMS Biology Pre-AP, Sem 1



Use the table to answer the next question.

	Organism 1	Organism 2	Organism 3	Organism 4
Reproduction	Mitosis/Meiosis	Binary Fission	Mitosis/Meiosis	Sexual/Asexual
Nuclear membrane	Yes	No	Yes	Yes
Level of organization	Multicellular	Unicellular	Multicellular	Most are unicellular
Photosynthesis in a chloroplast	Yes	No	No	Yes

8 Which organism is prokaryotic?

- A Organism 1
- B Organism 2
- C Organism 3
- D Organism 4

9 Which process is **not** a role of DNA?

- A Expression of genes
- B Mutation and recombination
- C Encoding genetic information
- D Controlling environmental conditions

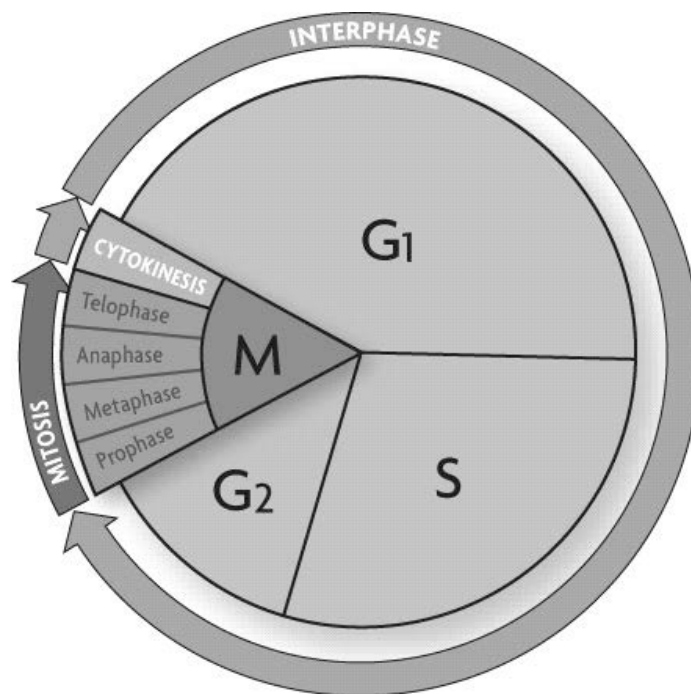
10 Which biomolecule is correctly paired with its function?

- A Lipids—express genes
- B Proteins—form enzymes
- C Carbohydrates—create hormones
- D Nucleic acids—insulate animal tissue

## EXAMPLE ITEMS Biology Pre-AP, Sem 1



Use the image to answer the next question.



Source: my.hrw.com

**11** An anticancer drug stops a cancer cell from dividing after the 2nd checkpoint. During which stage is this drug most effective in the cell cycle?

- A** Gap 1 (G1)
- B** Synthesis (S)
- C** Gap 2 (G2)
- D** Mitosis (M)

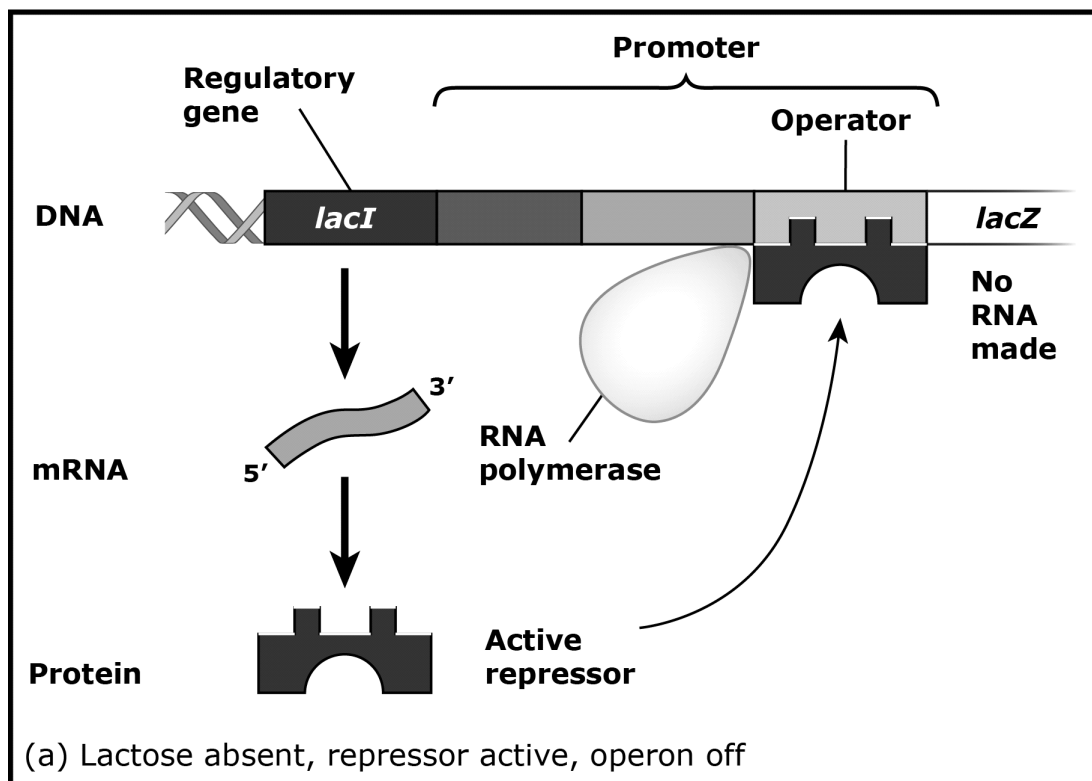
**12** A father has type AO blood and the mother has type BO. What is the probability of having a son or daughter with type O blood?

- A** 100%
- B** 50%
- C** 25%
- D** 0%

## EXAMPLE ITEMS Biology Pre-AP, Sem 1

- 13 Some bacteria are able to digest milk because lactase helps to break down the sugar, lactose, in milk.

### A Diagram of the Lac Operon



Source: slideshare.net

To code for the production of lactase in prokaryotes, the promoter and operator work as switches to activate or deactivate genes for lactase. This occurs during —

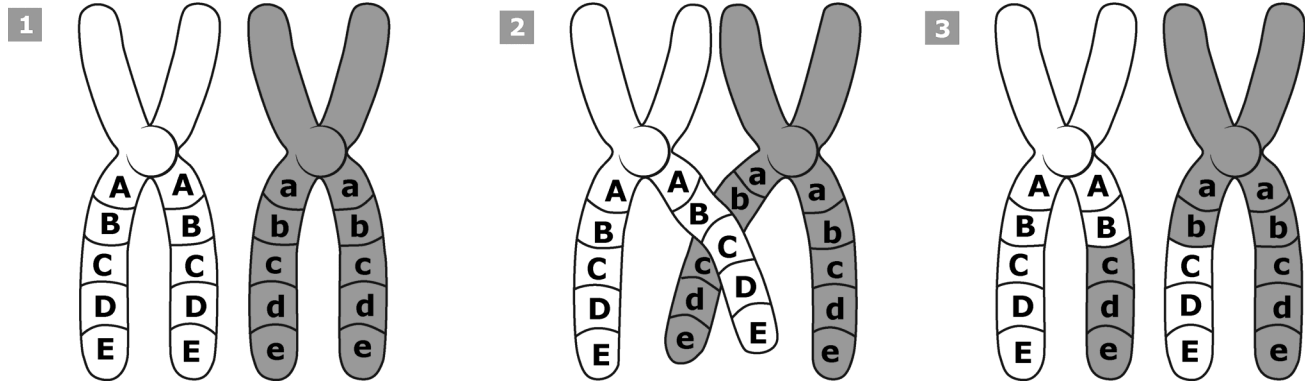
- A reproduction
- B replication
- C transcription
- D translation

## EXAMPLE ITEMS Biology Pre-AP, Sem 1



Use the sequence to answer the next question.

### Crossing Over in Meiosis



Source: slideplayer.com

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How is crossing over during meiosis significant?

- A Genes from mother and father mix to increase the variety of traits expressed by their children.
- B Gametes duplicate to alter the number of chromosomes present at the end of meiosis.
- C Genes replicate in an exact fashion to ensure children have the same traits as the parents.
- D Gametes begin with 48 chromosomes and still have 48 at the end of meiosis.



**EXAMPLE ITEMS Biology Pre-AP Key, Sem 1**

<b>Item#</b>	<b>Key</b>	<b>SE</b>	<b>Process Skills</b>	<b>SE Justification</b>
<b>1</b>	C	B.6C	B.2H	Explain the process of transcription using models of DNA and RNA.
<b>2</b>	A	B.5A	B.2F, B.2G	Describe the stages of the cell cycle including mitosis.
<b>3</b>	A	B.6E	B.2G	Identify changes in DNA and evaluate the significance of these changes.
<b>4</b>	B	B.9B	--	Compare the reactants and products of photosynthesis and cellular respiration in terms of energy, energy conversions, and matter.
<b>5</b>	C	B.4B	--	Investigate and explain cellular processes, including homeostasis and transport of molecules.
<b>6</b>	A	B.6A	--	Identify components of DNA.
<b>7</b>	D	B.4B	--	Investigate and explain cellular processes including homeostasis and transport of molecules.
<b>8</b>	B	B.4A	B.2G	Compare prokaryotic and eukaryotic cells.
<b>9</b>	D	B.5B	--	Describe the roles of DNA.
<b>10</b>	B	B.9A	--	Compare the functions of different types of biomolecules, including carbohydrates, lipids, proteins, and nucleic acids.
<b>11</b>	D	B.5C	--	Recognize that disruptors of the cell cycle lead to diseases such as cancer.
<b>12</b>	C	B.6F	--	Predict possible outcomes of various genetic combinations such as non-Mendelian inheritance.
<b>13</b>	C	B.6D	--	Recognize that gene expression is a regulated process.
<b>14</b>	A	B.6G	--	Recognize the significance of meiosis to sexual reproduction.