1. Base your answer to the following question on the diagram below, which shows the frontal boundary between mT and cP air masses.

If the front at ground level is moving toward city B, which type of weather front is shown?
(1) cold front (2) warm front (3) occluded front (4) stationary front

2. Which feature in the geologic cross section below was formed by erosion?
(1) unconformity (2) fault (3) brachiopod fossil (4) coarse-grained igneous rock

3. Which radioactive substance would probably be used in dating the recent remains of a plant found in sedimentary deposits?
(1) carbon-14 (2) potassium-40 (3) rubidium-87 (4) uranium-238

4. Wind moves from regions of
(1) high temperature toward regions of low temperature
(2) high pressure toward regions of low pressure
(3) high precipitation toward regions of low precipitation
(4) high humidity toward regions of low humidity

5. Which diagram below best represents the air circulation around a Northern Hemisphere low-pressure center?

6. Large oceans moderate the climatic temperatures of surrounding coastal land areas because the temperature of ocean water changes
(1) rapidly, due to water’s low specific heat (2) rapidly, due to water’s high specific heat (3) slowly, due to water’s low specific heat (4) slowly, due to water’s high specific heat
7. In which map does the arrow show the general direction that most low-pressure storm systems move across New York State?

(1) 

(2) 

(3) 

(4) 

8. The diagram below represents a cross-sectional view of a portion of the Earth’s crust.

Compared to the age of the sedimentary rock layers, the age of the igneous intrusion is

(1) younger

(2) older

(3) the same

9. The cross section below shows rock layers A, B, C, D, and fault F. The rock layers have not been overturned.

Which sequence places the rock layers and fault in order from oldest to youngest?

(1) D - C - B - A - F

(2) A - B - C - D - F

(3) F - D - C - B - A

(4) F - A - B - C - D

10. Base your answer to the following question on the diagram of a mountain shown below. The arrows represent the direction of airflow over the mountain.

As the air moves up the windward side of the mountain, the air

(1) compresses and warms

(2) compresses and cools

(3) expands and warms

(4) expands and cools
1. 2
2. 1
3. 1
4. 2
5. 2
6. 4
7. 3
8. 1
9. 1
10. 4