PART I

Reading 1 "Rising Sea Levels"

- P1 Sea level must be expressed as a range of values that are under constant reassessment. During the last century, sea level rose 10–20 cm (4–8 inches), a rate 10 times higher than the average rate during the last 3000 years. The 2007 IPCC (Intergovernmental Panel on Climate Change) forecast scenarios for global mean sea level rise this century, given regional variations, are
 - Low forecast: 0.18 m (7.1 in.)
 - Middle forecast: 0.39 m (15.4 in.)
 - High forecast: 0.59 m (23.2 in.)
- P2 Observations since 1961 show the average global ocean temperature increased to depths of 3000 m and the ocean absorbed more than 80% of climate system heating. Such warming causes thermal expansion of seawater, contributing to sea level rise. Mountain glaciers and snow cover declined on average in both hemispheres, contributing to sea level rise. Mount Kilimanjaro in Africa, portions of the South American Andes, and the Himalayas will very likely lose most of their glacial ice within the next two decades, affecting local water resources. Glacial ice continues its retreat in Alaska.
- P3 Surrounding the margins of Antarctica, and constituting about 11% of its surface area, are numerous ice shelves, especially where sheltering inlets or bays exist. Covering many thousands of square kilometers, these ice shelves extend over the sea while still attached to continental ice. The loss of these ice shelves does not significantly raise sea level, for they already displace seawater. The concern is for the possible surge of grounded continental ice that the ice shelves hold back from the sea.
- → Although ice shelves constantly break up to produce icebergs, some large P4 sections have recently broken free. In 1998 an iceberg the size of Delaware broke off the Ronne Ice Shelf, southeast of the Antarctic Peninsula. In March 2000 an iceberg tagged B-15 broke off the Ross Ice Shelf (some 90° longitude west of the Antarctic Peninsula), measuring twice the size of Delaware, 300 km by 40 km or 190 mi by 25 mi. Since 1993, six ice shelves have disintegrated in Antarctica. About 8000 km (3090 mi) of ice shelf are gone, changing maps, freeing up islands to circumnavigation, and creating thousands of icebergs. A Larsen-A suddenly disintegrated in 1995. B In only 35 days in early 2002, Larsen-B collapsed into icebergs. C Larsen C, the next segment to the south, is losing mass on its underside. This ice loss is likely a result of the 2.5°C (4.5°F) temperature increase in the peninsula region in the last 50 years. D In response to the increasing warmth, the Antarctic Peninsula is sporting new vegetation growth, reduced sea ice, and disruption of penguin feeding, nesting, and fledging activities.

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- P5 → A loss of polar ice mass, augmented by melting of alpine and mountain glaciers (which experienced more than a 30% decrease in overall ice mass during the last century) will affect sea-level rise. The IPCC assessment states that "between one-third to one-half of the existing mountain glacier mass could disappear over the next hundred years." Also, "there is conclusive evidence for a worldwide recession of mountain glaciers . . . This is among the clearest and best evidence for a change in energy balance at the Earth's surface since the end of the 19th century."
- P6 Unfortunately, the new measurements of Greenland's ice loss acceleration did not reach the IPCC in time for its report. Scientists are considering at least a 1.2 m (3.94 ft) high case for estimates of sea-level rise this century as more realistic given Greenland's present losses coupled with mountain glacial ice losses worldwide. According to Rahmstorf and colleagues, the data now available raise concerns that the climate system, in particular sea level, may be responding more quickly than climate models indicate.... The rate of sea-level rise for the past 20 years is 25% faster than the rate of rise in any 20-year period in the preceding 115 years.... Since 1990, the observed sea level has been rising faster than the rise projected by models. These increases would continue beyond 2100 even if greenhouse gas concentrations were stabilized.
- P7 → A quick survey of world coastlines shows that even a moderate rise could bring changes of unparalleled proportions. At stake are the river deltas, lowland coastal farming valleys, and low-lying mainland areas, all contending with high water, high tides, and higher storm surges. Particularly tragic social and economic consequences will affect small island states—which are unable to adjust within their present country boundaries—disruption of biological systems, loss of biodiversity, reduction in water resources, and evacuation of residents among the impacts there. There could be both internal and international migrations of affected human populations, spread over decades, as people move away from coastal flooding from the sea-level rise.
- 1. The word range in the passage is closest in meaning to
 - In function
 - B scale
 - © version
 - Iack
- 2. The word likely in the passage is closest in meaning to
 - Suddenly
 - B probably
 - © hopefully
 - ① actually

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- 3. Why does the author mention the state of Delaware in paragraph 4?
 - To include the North American continent in the discussion
 - To impress the reader with the size of the icebergs
 - © To emphasize the problems of coastal regions
 - To solicit support from residents in the United States

Paragraph 4 is marked with an arrow $[\rightarrow]$.

- 4. According to paragraph 4, why is there more new plant life in Antarctica recently?
 - (A) the mountain glaciers have melted
 - [®] the land masses have split into islands
 - © the icebergs have broken into smaller pieces
 - the temperature has risen by a few degrees

Paragraph 4 is marked with an arrow $[\rightarrow]$.

- 5. It may be inferred from this passage that icebergs are formed
 - by a drop in ocean temperatures
 - [®] when an ice shelf breaks free
 - © from intensely cold islands
 - If mountain glaciers melt
- 6. In paragraph 5, the author explains the loss of polar and glacial ice by
 - Stating an educated opinion
 - In the second second
 - © comparing sea levels worldwide
 - D presenting his research

Paragraph 5 is marked with an arrow $[\rightarrow]$.

- 7. The word conclusive in the passage is closest in meaning to
 - A definite
 - Independent Ind
 - © unique
 - valuable
- 8. Which of the sentences below best expresses the information in the highlighted statement in the passage? The other choices change the meaning or leave out important information.
 - The IPCC did not have the data about ice loss in Greenland before the report was published.
 - ^(B) This year, the report from Greenland did not measure the new ice loss for the IPCC.
 - © The new measurements by the IPCC did not include Greenland's ice loss this time.
 - ^(D) Greenland's recent ice loss had not accelerated enough to be reported to the IPCC.

- 9. According to paragraph 7, why will people move away from the coastlines in the future?
 - It will be too warm for them to live there.
 - ^(B) The coastlines will have too much vegetation.
 - © Flooding will destroy the coastal areas.
 - D No agricultural crops will be grown on the coasts.

Paragraph 7 is marked with an arrow $[\rightarrow]$.

- 10. Which of the following statements most accurately reflects the author's opinion about rising sea levels?
 - Sea levels would rise without global warming.
 - [®] Rising sea levels can be reversed.
 - © The results of rising sea levels will be serious.
 - D Sea levels are rising because of new glaciers.
- 11. The word there in the passage refers to
 - Interpretending in the second seco
 - B systems
 - © boundaries
 - ③ states
- 12. Look at the four squares [■] that show where the following sentence could be inserted in the passage.

The Larsen Ice Shelf, along the east coast of the Antarctic Peninsula, has been retreating slowly for years.

Where could the sentence best be added?

Click on a square [] to insert the sentence in the passage.

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13. **Directions:** An introduction for a short summary of the passage appears below. Complete the summary by selecting the THREE answer choices that mention the most important points in the passage. Some sentences do not belong in the summary because they express ideas that are not included in the passage or are minor points from the passage. *This question is worth 2 points.*

Global warming is causing a rise in sea levels, with accompanying changes in coastal boundaries as well as social and economic ramifications.

Answer Choices

- A The ice shelf called Larsen-A suddenly disintegrated in 1995.
- B Even an average rise in sea levels will cause serious social and economic changes.
- C Continental ice shelves and grounded ice sheets from Antarctica to the Polar cap are melting into the oceans.
- It is predicted that many human migrations inland will occur along flooded coastal regions.
- E The melting of glacial ice on high mountain ranges will affect regional water resources worldwide.
- E Scientists at NASA have concluded that the ice sheet in Greenland is melting at a rate of about 1 meter every year.

PART II

Reading 2 "Organic Architecture"

P1 → One of the most striking personalities in the development of early-twentiethcentury architecture was Frank Lloyd Wright (1867–1959). Wright moved to Chicago, where he eventually joined the firm headed by Louis Sullivan. Wright set out to create "architecture of democracy." Always a believer in architecture as "natural" and "organic," Wright saw it as serving free individuals who have the right to move within a "free" space, envisioned as a nonsymmetrical design interacting spatially with its natural surroundings. He sought to develop an organic unity of planning, structure, materials, and site. Wright identified the principle of continuity as fundamental to understanding his view of organic unity: "Classic architecture was all fixation. . . . Now why not let walls, ceilings, floors become seen as component parts of each other? . . . This ideal, profound in its architectural implications . . . I called . . . continuity."