

Question 1-11 are based on the following passage.

### John Snow and the Story of the Broad Street Pump

From discovering the causes of polio and smallpox to controlling epidemics all around the world, epidemiologists have been behind many of our current advancements in public health. While the field of epidemiology now encompasses a wide range of skills and methods, its origin is commonly traced back **1** to a single story: the tale of John Snow and the Broad Street pump.

Snow was born in England in 1813—a time when the prevailing notion behind disease transmission was the “miasma theory.” **2** According to this theory, diseases were spread through particles from decomposed matter that would then become part of the air. Snow, who had survived a number of cholera epidemics in his childhood before pursuing a career in medicine, was **3** cynical about this elegant but incorrect theory. However, it was not until the cholera epidemic of 1854 that he was able to acquire insurmountable evidence showing that cholera was caused by something other than “bad air.”

**1**

- A) NO CHANGE
- B) to: a single story,
- C) to a single story:
- D) to: a single story

**2**

The writer is considering deleting the underlined sentence.

Should the writer make this deletion?

- A) Yes, because the sentence contains unnecessary information about the miasma theory that is irrelevant to the main topic of the paragraph.
- B) Yes, because the sentence introduces a new idea that shifts the focus away from the main topic of the paragraph.
- C) No, because the sentence provides information essential to understanding the “bad air” reference made later in the paragraph.
- D) No, because the sentence introduces a method of reasoning that is central to the field of epidemiology.

**3**

- A) NO CHANGE
- B) suspected of
- C) questionable about
- D) suspicious of

Within the first two weeks of September, 1854, over 500 people had mysteriously died **4** of cholera. Those who had died were all within 250 yards of the Cambridge Street and Broad Street intersection in the Soho district of London. Snow began analyzing the addresses of those who had contracted the disease. He found that, of the hundreds of cases of cholera near Soho, **5** and all but ten involving people who lived near the contaminated pump on Broad Street. Of the remaining ten cases, five involved people who preferred the water from the Broad Street pump and three involved children who went to school near the Broad Street pump. Snow's research was too compelling for the local council to ignore: they eventually removed the Broad Street pump from service, **6** effectively ending the cholera outbreak in Soho.

4

Which choice most effectively combines the sentences at the underlined portion?

- A) of cholera, and those who had died from it were all
- B) —all from cholera and all dying
- C) of cholera, all of whom were
- D) of cholera—all

5

- A) NO CHANGE
- B) all but ten involved
- C) all but ten involving
- D) and all but ten involved

6

- A) NO CHANGE
- B) in affect
- C) effectively
- D) in efficacy

7 Today, epidemiology is considered a basic science of public health. It is a quantitative discipline built on probability, statistics, and research 8 methods, a method of causal reasoning based on developing and testing hypotheses, and a tool to promote and protect the health of the public. Examples of applied epidemiology include monitoring reports of communicable diseases in the 9 community; and tracking down the cause of a food-borne outbreak. While many epidemiologists work for health departments at the local and state levels, a number are also employed by colleges and universities.

7 At this point, the writer wants to include an effective transition from the subject of the previous paragraph to the subject of the new paragraph. Which best accomplishes this goal?

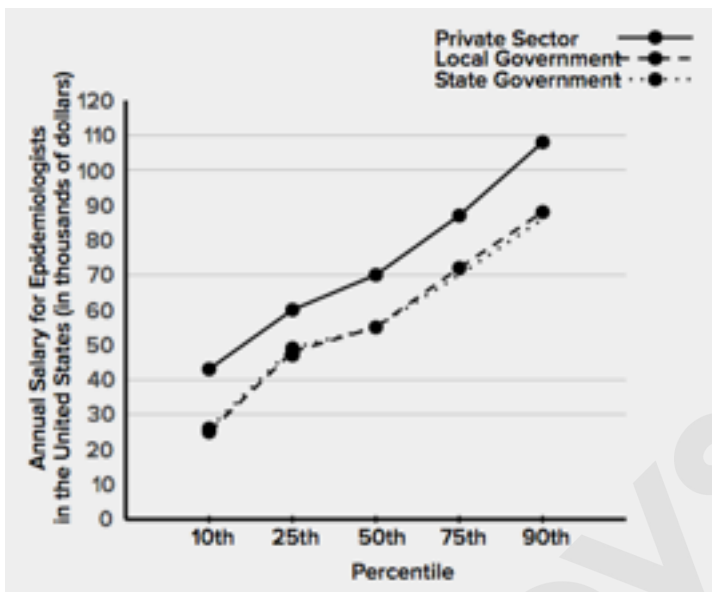
- A) Though Snow did not know it at the time, his investigative approach to the cholera epidemic would become the foundation of the field of epidemiology.
- B) Snow's approach to the cholera epidemic was the first time such a novel approach was used in a scientific investigation.
- C) The Broad Street pump story is often one of the first things taught in college-level epidemiology courses.
- D) Following the removal of the Broad Street pump, it was only a matter of time before scientists began to recognize that cholera was a water-borne disease.

- 8
- A) NO CHANGE
  - B) methods; a method of causal reasoning based on developing and testing hypotheses; and
  - C) methods, a method of causal reasoning based on developing and testing hypotheses; and
  - D) methods; a method of causal reasoning based on developing and testing hypotheses, and

- 9
- A) NO CHANGE
  - B) community— and
  - C) community: and
  - D) community and

10 In 2012, the median wage for epidemiologists in the United States was around \$60,000, though this number was substantially larger for those working in the state government. For those interested in pursuing a career in this field, the prospects also look bright, 11 but employment is projected to grow 10 percent between 2012 and 2022.

Annual Salary for Epidemiologists in the United States, by Sector



Source: Data from Bureau of Labor Statistics, U.S. Department of Labor, Occupational Outlook Handbook, 2014-15 Edition.

10

After reviewing the passage and the graph, the writer determines that the statement made in the underlined sentence is not accurate. Which of the following revisions should the writer make to correct the inaccuracy?

- A) Replace “\$ 60,000” with “\$ 50,000.”
- B) Replace “\$60,000” with “\$100,000.”
- C) Replace “state government” with “local government.”
- D) Replace “state government” with “private sector.”

11

- A) NO CHANGE
- B) with employment
- C) in which employment is
- D) notwithstanding that employment is