

Question 11-21

Some pioneering work that began as an attempt to discover ways to increase production efficiency led to the founding of the human relations movement in industry and to the development of motivational skills and tools for managers. In 1927 researchers were involved in determining the optimum amount of lighting, temperature, and humidity (with lighting being considered the most important) for the assembly of electronic components at Western Electric. The researchers found that lighting had no consistent effect on production. In fact, production sometimes increased when lighting was reduced to the level of ordinary moonlight! The important part of this experiment began when two Harvard researchers, Elton Mayo and Fritz Roethlisberger, were brought in to investigate these unexpected results further. They found that workers were responding not to the level of lighting but to the fact that they were being observed by the experimenters.

This phenomenon came to be known as the Hawthorne effect since the experiments were conducted at the Western Electric Hawthorne plant. This was the first documented and widely published evidence of the psychological effects on doing work, and it led to the first serious effort aimed at examining psychological and social factors in the workplace. Further experiments were continued for five years. Generally, the researchers concluded from their experiments that economic motivation (pay) was not the sole source of productivity and, in some cases, not even the most important source. Through interviews and test results, the researchers focused on the effects of work attitudes, supervision, and the peer group and other social forces, on productivity.

Their findings laid the groundwork for modern motivation theory, and the study of human factors on the job, which continues to this day in such common practices as selection and training, establishing favorable work conditions, counseling, and personnel operations. The contributions of this experiment shifted the focus of human motivation from economics to a multifaceted approach including psychological and social forces.

11. What is the passage primarily about?
- (A) The first widely published development in modern motivation theory
 - (B) Shifting the focus of human motivation from economics to a multifaceted approach
 - (C) The importance of careful research
 - (D) The results of a pioneering study at Western Electric
12. The word "optimum" in line 4 is closest in meaning to
- (A) positive
 - (B) favorable
 - (C) best
 - (D) alternate
13. The most significant finding of the original research was
- (A) lighting had no consistent effect on production
 - (B) production sometimes increased when lighting was reduced to the level of ordinary moonlight.
 - (C) that lighting was no more important than the other factors of temperature and humidity.
 - (D) the results were unexpected and confusing.
14. Why does the author say that the important part of this research began when two Harvard researchers were brought in (lines 8-9)
- (A) Until then the research had been poorly conducted
 - (B) They took a multifaceted approach
 - (C) The results of the original research did not make sense
 - (D) Harvard has a good reputation in conducting research
15. The research became known as the "Hawthorne effect" because
- (A) it was the name of the plant where the study was conducted
 - (B) It was the name suggested by the Harvard researchers
 - (C) It was the name of the principal experimenter

- (D) There were Hawthorne plants growing at Western Electric where the study was conducted
16. The word "it" in line 14 refers to
 (A) the experiment (B) economic motivation
 (C) the Western Electric Hawthorn plant (D) the Hawthorne effect
17. It can be inferred from this passage that the Hawthorne study
 (A) led to lighting, temperature, and humidity no longer being considered important when seeking ways to improve production
 (B) Stimulated further research into work condition and worker behavior
 (C) Led to psychological factors becoming the most important consideration in achieving production efficiency
 (D) Led to economic considerations being less important in achieving productivity
18. Part of the reason for the change in focus from economics to a more multifaceted approach to the psychological effects on doing work was
 (A) due to the recognition that workers should be happy at work in order to maintain high productivity
 (B) a general conclusion that pay was sometimes not the most important factor
 (C) because the Hawthorne study continued for so long
 (D) because the workers requested it
19. According to the passage, it can be concluded that a "multifaceted approach" to human motivation in the workplace
 (A) excludes economics
 (B) can lead to greater productivity
 (C) excludes physical conditions
 (D) focuses mainly on psychological and social forces
20. The word "multifaceted" in line 25 is closest in meaning to
 (A) versatile (B) complex (C) many-sided (D) multitude
21. Which of the following is NOT true about the Hawthorne study
 (A) It was the first documented evidence of the psychological effects on doing work
 (B) The Hawthorne study continued for five years
 (C) They found that workers responded not to the level of lighting but to the fact that other work conditions were not favorable
 (D) The study changed the focus from economics to a multifaceted approach

Question 22-31

The handling and delivery of mail has always been a serious business, underpinned by the trust of the public in requiring timeliness, safety, and confidentiality. After early beginnings using horseback and stagecoach, and although cars and trucks later replaced stagecoaches and wagons, the Railway Mail Service still stands as one of America's most resourceful and exciting postal innovations. This service began in 1832, but grew slowly until the Civil War. Then from 1862, by sorting the mail on board moving trains, the Post Office Department was able to decentralize its operations as railroads began to crisscross the nation on a regular basis, and speed up mail delivery. This service lasted until 1974. During peak decades of service, railway mail clerks handled 93% of all non-local mail and by 1905 the service had over 12,000 employees.

Railway Post Office trains used a system of mail cranes to exchange mail at stations without stopping. As a train approached the crane, a clerk prepared the catcher arm which would then snatch the incoming mailbag in the blink of an eye. The clerk then booted out the outgoing mailbag. Experienced clerks were considered the elite of the Postal Service's employees, and spoke with pride of making the switch at night with nothing but the curves and feel of the track to warn them of an upcoming catch. They also

worked under the greatest pressure and their jobs were considered to be exhausting and dangerous. In addition to regular demands of their jobs they could find themselves the victims of train wrecks and robberies.

(20) As successful as it was, "mail-on-the-fly" still had its share of glitches. If they hoisted the train's catcher arm too soon, they risked hitting switch targets, telegraph poles or semaphores, which would rip the catcher arm off the train. Too late, and they would miss an exchange.

22. What does the passage mainly discuss?
 (A) How Post Office Trains handled the mail without stopping
 (B) The skills of experienced clerks
 (C) How the mail cranes exchanged the mail
 (D) Improvements in mail handling and delivery
23. The word "underpinned" in line 1 is closest in meaning to
 (A) lowered (B) underlain (C) obliged (D) required
24. The public expects the following three services in handling and delivery of mail except
 (A) confidentiality (B) timeliness (C) safety (D) accuracy
25. According to the passage, the Railway Mail Service commenced in
 (A) 1832 (B) 1842 (C) 1874 (D) 1905
26. Which of the following can be inferred from the first paragraph
 (A) Mail was often lost or damaged as it was exchanged on the mail crane
 (B) There was a high turnover of railway mail clerks
 (C) The development of the railroads during the second half of the 19th century enabled Post Office Department to focus on timeliness
 (D) The Post Office Department was more concerned about speeding up mail delivery than the safety of its clerks
27. The word "elite" in line 14 is closest in meaning to
 (A) superior (B) majority (C) more capable (D) leader
28. Which of the following is true, according to the passage
 (A) The clerk booted out the outgoing mailbag before snatching the incoming bag
 (B) Clerks couldn't often see what they were doing
 (C) The Railway Mail clerk's job was considered elite because it was safe and exciting
 (D) Despite their success railway mail clerks only handled a small proportion of all non-local mail
29. In line 18, the word "they" refers to
 (A) trains (B) Postal Service's employees
 (C) Mailbags (D) Experience clerks
30. The word "glitches" in line 20 can be replaced by
 (A) accidents (B) blames (C) advantages (D) problems
31. Where in the passage does the author first mention the dangers of the Post Office clerk's job?
 (A) Lines 5-9 (B) Lines 10-14 (C) Lines 15-19 (D) Lines 20-23