

Answers to Review of Chapter 13

1. (2) 2. (2) 3. (4) 4. (1) 5. (1) 6. (3) 13. (2) 14. (2) 15. (4) 16. (1) 17. (3) 18. (4)
7. (4) 8. (3) 9. (1) 10. (3) 11. (3) 12. (1) 19. (1) 20. (3)

Answers to Review Questions in Reviewing Intermediate-Level Science

RELATIONSHIP OF SCIENCE AND TECHNOLOGY

Pages 367–369— Process Skill: Using a Radio Communication Timeline

- Discoveries—Franklin, Ohm, and Maxwell
Devices—Volta, Henry, Morse, Bell, and Hughes
- Edison's achievement was a scientific discovery.
- Fleming's achievement was a technological device.

Review Questions Page 369–372

Part I

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

Part II

- Between 1975 and 2005 the number of electric typewriters in the newsroom decreased. During the same time period the number of word processors increased.
- Word processing technology (computers) is most probably being used today.
- Older technology is replaced by newer and better technology.
- A feedback system such as a thermostat is missing in heating system A.
- If the input were changed to too warm, the furnace would either not turn on, or if it was running it would turn off.

INTERACTION OF SCIENCE, TECHNOLOGY, AND SOCIETY

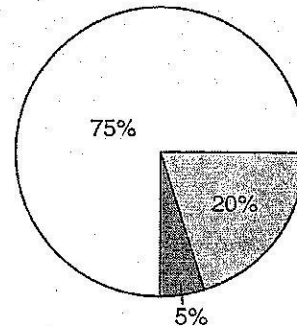
Review Questions Page 377–380

Part I

16. (4) 17. (2) 18. (1) 19. (4) 20. (3) 21. (2)
22. (1) 23. (2) 24. (1) 25. (3)

Part II

26.



- Between 1950 and 2000 information technologies increased and the industrial work force decreased. There was a shift from industrial jobs to information jobs.
- Between 1950 and 2000 technology increased the information work force. There are many examples how new technology caused this. Here are three: 1) the increase in computer usage, 2) the increase in cell phone usage, and 3) the increase in television usage.
- Scientists propose that the cause of increased carbon dioxide is the burning of fossil fuels associated with industry and motor vehicles.
- The increase in carbon dioxide is causing the atmosphere to become warmer. This is called global warming.

31. If the amount of carbon dioxide continues to increase through the 21st century, glaciers are expected to melt and sea level will rise, flooding low-lying areas.

MAKING DECISIONS ABOUT TECHNOLOGY

Review Questions Pages 383-385

Part I

32. (2) 33. (2) 34. (3) 35. (3) 36. (3) 37. (1)
38. (2)

Part II

39. The effluent control law and bottle deposit law deal with environmental problems.

40. The benefit and burden of the mandatory motorcycle helmet law are in the wrong order.

41. The benefit of the seat belt law is that it saves lives. The burden of the seat belt law is that it is an inconvenience to buckle up every time you get into your car.

42. The deposit bill became law in 1984 or 1985. The number of bottles collected decreased in 1986.

43. Yes, the bottle bill is successful. The number of bottles collected has decreased considerably since the early 1980s.