

**CHAPTER
1**

An Introduction to Machining Technology

Complete the following questions after carefully reading the corresponding textbook chapter.

1. The back-and-forth motion of the bow lathe is known as _____ motion.

2. _____ The first true machine tool was a _____.

- A. boring mill
- B. drill press
- C. shaper
- D. sawing machine

3. _____ Henry Maudslay designed and constructed the first _____.

- A. true machine tool
- B. lathe capable of cutting accurate screw threads
- C. boring mill capable of turning a cylinder 36" in diameter
- D. milling machine capable of making interchangeable parts

4. What great period in history could not have taken place without the advent of the steam engine?

5. _____ Eli Whitney _____.

- A. devised a system for mass production in the 1820s
- B. was an English inventor and manufacturer who invented the boring mill
- C. invented the standard measuring system used in the United States
- D. developed the first multitoothed saw blade

6. List seven types of power sources.

7. _____ A drill press is primarily used for _____.

- A. cutting round holes
- B. removing metal by rotating or grinding a workpiece
- C. cutting stock material into manageable lengths
- D. removing a small amount of machined material

8. List the names of at least three machining operations that have *not* evolved from the lathe.

9. The early control system designed by MIT operated on instructions coded in the _____ system.

10. In the mid-1970s, the introduction of the _____ made the use of onboard computers on individual machine tools possible.

11. _____ CNC machine tools _____.

- A. use computer programs supplied on punched tapes
- B. require extensive knowledge of programming languages
- C. are more difficult to use than manually controlled machines
- D. offer better repeatability and accuracy than manual machine tools

12. The use of _____ systems for loading and unloading permits some machine tools to operate unattended during the entire machining cycle.

13. List at least three of the decisions that a machinist must make before manufacturing a part.

14. _____ Machinists usually take part in a multiyear _____ program.

- A. internship
- B. degree
- C. apprentice
- D. survey

15. The National Institute for Metalworking Skills (NIMS) uses _____ as the basis for industry-recognized certification through performance testing.

