

## KNOWLEDGE PROBE

### Careers and Education in the Electronics Industry

#### Learning Objectives

1. Name the five major categories of technical jobs available in electronics.
2. Explain the difference between engineering and technology degrees.
3. Relate the job and position to the type of degree normally held by persons in that category.
4. State the educational requirements for becoming an engineer.
5. State the educational requirements for becoming a technologist.
6. State the educational requirements for becoming a technician.
7. Explain the incompatibility of the engineering and technician educational paths.
8. Identify the graduate school potential for technicians and technologists.
9. Identify the type of work done by engineers.
10. Identify the type of work done by technologists.
11. Identify the type of work done by technicians.
12. List at least five categories of technician work.
13. List four categories of other technician level jobs.

1. Which of the following is NOT a typical type of technical job category in electronics?
  - a. Engineer
  - b. Manager
  - c. Scientist
  - d. Technician
2. Which type of degree does a technician usually have?
  - a. AAS
  - b. BSEE
  - c. BSET
  - d. MBA
3. Persons holding a BSET often do some types of engineering work.
  - a. True
  - b. False
4. Which degree do people who do the mathematical analysis and design of equipment usually have?
  - a. AAS
  - b. BSEE
  - c. BSET
  - d. MBA



5. There is such a thing as a Masters of Technology degree.
  - a. True
  - b. False
6. The major function of a technician on the job is
  - a. Analysis and design
  - b. Customer help
  - c. Sales
  - d. Troubleshooting and service
7. An AAS graduate will have most of his/her college technical course credits accepted in a BSEE degree program as part of a transfer.
  - a. True
  - b. False
8. A person holding a BSET degree is sometimes referred to as
  - a. Engineer
  - b. Factory worker
  - c. Scientist
  - d. Technician
9. A BSET graduate may aspire to an MBA degree.
  - a. True
  - b. False
10. Engineers must usually have an MSEE degree before they can take a job in industry.
  - a. True
  - b. False
11. Which of the following is NOT typical of the work done by a technician?
  - a. Install and operate
  - b. Service and repair
  - c. Simulate and design
  - d. Test and measurement
12. A technician who works with cables and connectors in various systems is generally called a
  - a. Field service rep
  - b. Manufacturing technician
  - c. Network technician
  - d. Wiring technician
13. A biomedical technician
  - a. Assists surgeons in the operating room
  - b. Maintains and repairs electronic diagnostic equipment
  - c. Takes blood samples from patients
  - d. Takes x-rays



14. A wireless technician most typically works on
  - a. Cables and connectors
  - b. Cell phone base stations
  - c. Radio TV broadcast equipment
  - d. Security systems
15. Wireless LANs techs often work with antennas.
  - a. True
  - b. False
16. Semiconductor manufacturing technicians work in a(n)
  - a. Automated factory
  - b. Clean room
  - c. Process control plant
  - d. Research lab
17. A technical education is rarely needed in selling complex electronic equipment and systems.
  - a. True
  - b. False
18. The typical work output from a technical writer is
  - a. Customer phone calls
  - b. Sales presentations
  - c. Service and instruction manuals
  - d. Teaching technical people
19. A great deal of customer technical support is handled by way of
  - a. Face-to-face meetings
  - b. Mail
  - c. Telephone
  - d. Website
20. Technical trainers prepare learning materials and classes for
  - a. Customers
  - b. Employees
  - c. Both of the above
  - d. None of the above