

## CHAPTER TWO: ENGINEERING MAJORS

### MULTIPLE CHOICE

1. Which of the following is *not* an engineering function?

- a. Consulting
- b. Teaching
- c. Development
- d. Electronic
- e. None of the above

**ANSWER: D**

2. Which of the following is *not* an engineering branch?

- a. Electrical
- b. Mining
- c. Operations
- d. Chemical
- e. None of the above

**ANSWER: C**

3. Which of the following is *not* an engineering function?

- a. Sales
- b. Customer Support
- c. Management
- d. Systems
- e. None of the above

**ANSWER: C**

4. Which of the following is *not* an engineering branch?

- a. Electrical
- b. Mining
- c. Operations
- d. Chemical
- e. None of the above

**ANSWER: C**

5. The “R” in “R and D” stands for:

- a. Research
- b. Robotics
- c. Resistance
- d. Relativity

**ANSWER: A**

### **TRUE/FALSE**

6. The engineering branch most closely affiliated with business principles is industrial engineering.

**ANSWER: True**

7. Your Introduction to Engineering instructor’s function within engineering is in *consulting*.

**ANSWER: False**

8. Most engineering branches have some aspects which overlap into other engineering branches.

**ANSWER: True**

9. An engineer involved in refrigeration, heating and air conditioning would most likely be a mechanical engineer.

**ANSWER: True**

10. At most 4-year universities, the computer science department is located within the college of engineering.

**ANSWER: True**

11. A marine engineer is focused mainly on boat and ship design.

**ANSWER:** True

12. Operations research is a subset of nuclear engineering.

**ANSWER:** False

13. Highway design is a subset of civil engineering.

**ANSWER:** True

14. Signal processing is a subset of electrical engineering

**ANSWER:** True

**Reference: List 2:**

Write the number from the list of engineering branches or sub-branches for the **most** appropriate description. Note that all of the choices will **not** be used.

- a. Aerospace engineering
- b. Agricultural engineering
- c. Architect
- d. Biomedical engineering
- e. Ceramic engineering
- f. Chemical engineering
- g. Civil engineering

- h. Computer engineering
- i. Computer science
- j. Construction engineering
- k. Electrical engineering
- l. Environmental engineering
- m. Geotechnical engineering
- n. Industrial engineering
- o. Manufacturing engineering
- p. Materials engineering
- q. Mechanical engineering
- r. Mining engineering
- s. Nuclear engineering
- t. Petroleum engineering
- u. Structural engineering

15. Deals with design of hardware, as opposed to software

**ANSWER: H**

**Refer to: List 2**

16. Develops Kevlar, Mylar, Nylon, Rayon, Fibreglas, other plastics, and high-strength steel

**ANSWER: P**

**Refer to: List 2**

17. Involved in the process of finding new sites from which coal and nickel can be extracted

**ANSWER: R**

**Refer to: List 2**

18. Involved in cleaning up toxic wastes, and rehabilitating abandoned gas-station tanks.

**ANSWER: L**

**Refer to: List 2**

19. Exploration, production and transportation of natural gas

**ANSWER: T**

**Refer to: List 2**

20. Common employers might include Boeing, Airbus, Rockwell, Lockheed-Martin, and NASA

**ANSWER: A**

**Refer to: List 2**

21. Designs process to determine radiation levels from spent fuel core rods

**ANSWER: S**

**Refer to: List 2**

22. Designs a process which accelerates the ripening of grapes used in the wine industry

**ANSWER: B**

**Refer to: List 2**

23. Involved in the design of artificial human joints, such as knees, elbows, and shoulders

**ANSWER: D**

**Refer to: List 2**

24. Involved in designing housing foundations, and retaining walls used on hillside homes.

**ANSWER: M**

**Refer to: List 2**

25. Develops a process whereby ethanol (ethyl alcohol) is added to gasoline

**ANSWER: F**

**Refer to: List 2**

26. Involved in writing code in languages including Pascal, C++, FORTRAN, Basic and Java

**ANSWER: I**

**Refer to: List 2**

27. Designed the central heating/cooling system used in the classroom where you are now sitting

**ANSWER: Q**

**Refer to: List 2**

28. Sub-disciplines include communications, power, and computers

**ANSWER: K**

**Refer to: List 2**

29. In most construction projects of buildings, the profession normally hired as project leader and/or coordinator.

**ANSWER: C**

**Refer to: List 2**

30. Creates new methods and tools for computer microchip assembly lines to perform their job easier, faster, and more efficiently.

**ANSWER: O or N**

**Refer to: List 2**

31. Designs a storm drain which will never get clogged with trees and leaves.

**ANSWER: G**

**Refer to: List 2**

### **Reference: List 3**

Write the number from the list of engineering branches or other engineering related groups below before the **abbreviation for that branch's professional society**. Note that all of the choices on the left will **not** be used.

1. Aerospace engineering
2. Agricultural engineering
3. Architecture
4. Automotive engineering
5. Biomedical engineering
6. Blacks in engineering
7. Chemical engineering
8. Civil engineering
9. Computer engineering
10. Computer science
11. Construction engineering
12. Electrical engineering
13. Engineering education
14. Environmental engineering
15. Geotechnical engineering
16. Heating, Refrigeration, Air Conditioning engineering
17. Hispanics in engineering
18. Industrial engineering
19. Manufacturing engineering
20. Materials engineering
21. Mathematics
22. Minorities in engineering
23. Mechanical engineering
24. National Science Foundation
25. Nuclear engineering
26. Petroleum engineering
27. Standards and Technology
28. Women in engineering

32. ASCE  
**ANSWER: 8**  
**Refer to: List 3**

33. IIE  
**ANSWER: 18**  
**Refer to: List 3**

34. ASME  
**ANSWER: 23**  
**Refer to: List 3**

35. ACS  
**ANSWER: 7**  
**Refer to: List 3**

36. IEEE  
**ANSWER: 12**  
**Refer to: List 3**

37. ASHRAE  
**ANSWER: 16**  
**Refer to: List 3**

38. AIA  
**ANSWER: 3**  
**Refer to: List 3**

39. NACME  
**ANSWER: 22**  
**Refer to: List 3**



40. MAA  
**ANSWER:** 21  
**Refer to:** List 3

41. SWE  
**ANSWER:** 28  
**Refer to:** List 3

42. NSF  
**ANSWER:** 24  
**Refer to:** List 3

43. NIST  
**ANSWER:** 27  
**Refer to:** List 3

44. SAE  
**ANSWER:** 4  
**Refer to:** List 3

45. AIAA  
**ANSWER:** 1  
**Refer to:** List 3

46. ANS  
**ANSWER:** 25  
**Refer to:** List 3

47. ASEE  
**ANSWER:** 13  
**Refer to:** List 3

48. CSI (not the TV show)

**ANSWER:** 11

**Refer to: List 3**

49. NSBE

**ANSWER:** 6

**Refer to: List 3**

50. SME

**ANSWER:** 19

**Refer to: List 3**

51. SHP

**ANSWER:** 17

**Refer to: List 3**