Test Bank Answers for

ENGINEERING FUNDAMENTALS
An Introduction to Engineering

Fourth Edition, SI

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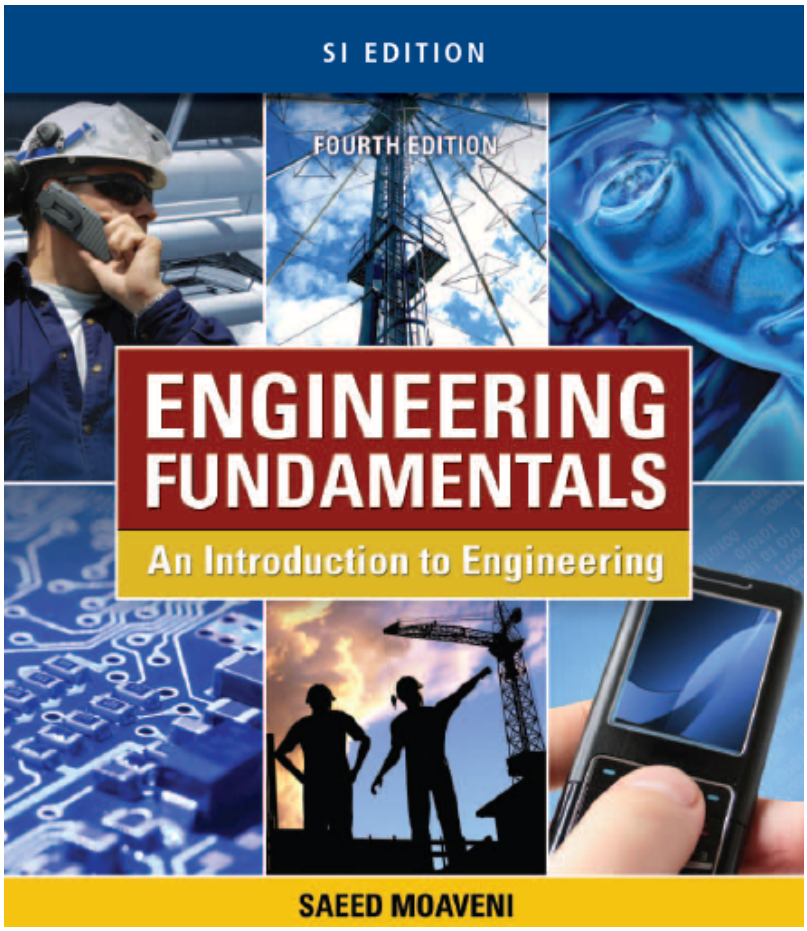

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1. What does NSPE stand for?

a. National Society of Pipeline Engineers

b. National Society of Petroleum Engineers

c. National Society of Professional Engineers

d. Northern States Power Enterprise

Answer: c

2. For which of the following products are engineers directly involved in the production?

a. Automobiles

b. Bridges

c. Drinking water

d. MP3 players

e. Highways

f. Notebook paper

g. All of the above

Answer: g

3. The world-wide population of people 65 years of age and older will double in the next 25 years.

a. True

b. False

Answer: a

4. Which of the following are among the fastest growing occupations?

a. Computer specialists

b. Engineers

c. Systems analysts

d. All of the above

Answer: d

5. List at least five products in your home, apartment or dorm room that engineers are directly involved in the production of.

6. What does NASA stand for?

a. North American Space Agency

b. North American Space Administration

c. National Aeronautics and Space Administration

d. National Aero-Space Administration

Answer: c

7. Engineers work in which field?

a. Design

b. Sales

c. Technical support

d. Maintenance

e. Customer service

f. All of the above

Answer: f

8. List at least five traits of good engineers

9. Good engineers are analytical, detail oriented, and creative.

a. True

b. False

Answer: a

10. Good engineers don't need strong time-management skills because their boss usually takes care of scheduling.

a. True

b. False

Answer: b

11. Fill in the blanks: Good engineers have good _____ and _____ communication skills.

Answer: "written" and "verbal (oral)"

12. Good engineers don't need good "people skills" since most of their work is done independently in a lab.

a. True

b. False

Answer: b

13. List at least five engineering disciplines.

14. What does ABET stand for?

a. Accreditation Bureau for Engineering and Technology

b. American Board of Engineers and Technicians

c. Association for Better Engineers and Technicians

d. Accreditation Board for Engineering and Technology

Answer: d

15. Most graduating engineering students take an eight-hour exam called the FE exam. What does FE stand for?

Answer: "Fundamentals of Engineering"

16. According to ABET, engineering graduates should be able to: (choose all that apply)

a. Analyze and interpret data

b. Apply knowledge of mathematics

c. Earn a high salary

d. Communicate effectively

Answer: a, b, and d

17. Engineers often use computers to model and analyze design problems.

a. True

b. False

Answer: a

18. Which one of the following engineering disciplines is most likely to be involved with providing public infrastructure and services?

a. Mechanical Engineering

b. Civil Engineering

c. Electrical Engineering

d. Chemical Engineering

e. Aerospace Engineering

Answer: b

19. Which one of the following engineering disciplines is most likely to be involved with providing lighting and wiring for buildings?

a. Mechanical Engineering

b. Civil Engineering

c. Electrical Engineering

d. Chemical Engineering

e. Aerospace Engineering

Answer: c

20. Which one of the following engineering disciplines is most likely to be involved with providing heating, cooling, and refrigerating equipment?

a. Mechanical Engineering

b. Civil Engineering

c. Electrical Engineering

d. Chemical Engineering

e. Aerospace Engineering

Answer: a

21. Which one of the following engineering disciplines is most likely to be involved with providing military aircraft and missiles?

a. Mechanical Engineering
b. Civil Engineering
c. Electrical Engineering
d. Chemical Engineering
e. Aerospace Engineering
Answer: e

22. Which one of the following engineering disciplines is most likely to be involved in the pharmaceutical industry?

a. Mechanical Engineering
b. Civil Engineering
c. Electrical Engineering
d. Chemical Engineering
e. Aerospace Engineering
Answer: d

23. Engineers rarely use mathematics on the job.

a. True
b. False
Answer: b

24. Good engineers are dedicated to: (choose all that apply)

a. Lifelong learning
b. Service to others
c. Public safety
d. Earning a high salary
Answer: a, b, and c

25. Continuing education classes, seminars and workshops are examples of:

a. Service to others

b. Lifelong learning

c. Fundamental principles

d. Networking

Answer: b

1. How many hours are there in a week?

Answer: 168

2. How many hours per week do you spend sleeping?

3. How many credits are required for a B.S. degree in engineering?

Answer: 128 (most schools)

4. How many credits, on average, are required per semester to graduate with a B.S. in engineering in four years?

Answer: 16 (most schools)

5. How many hours should you spend studying outside of class for each hour spent in class?

Answer: 3 (for engineering courses)

6. It is best to take notes on loose papers so that you can easily arrange and organize your notes.

a. True

b. False

Answer: b

7. A good way to learn something is to explain ideas and concepts in your own words to others in a group.

a. True

b. False

Answer: a

8. The following is a good daily study practice (choose all that apply):

a. Attend classes regularly

b. Keep up with the reading

c. Get help right away

d. Drink plenty of caffeine

e. Take good notes

f. Form study groups

Answer: a, b, c, e, and f

9. During your four-year program, in which year will you take:

a. Calculus

b. Differential equations

c. Linear algebra

d. Chemistry

e. Physics

Answers: a. year 1

b. year 2

c. year 2 or 3

d. year 1 or 2

e. year 1 or 2

10. What does ASCE stand for?

a. American Society of Civil Engineers

b. American Society of Chemical Engineers

c. Association of Service Coordinating Engineers

d. All-State Corps of Engineers

Answer: a

11. What does SAE stand for?

a. Society of Agricultural Engineers

b. Society of Automotive Engineers

c. Society of Aerospace Engineers

d. Society of Aeronautical Engineers

Answer: b

12. What does ASME stand for?

a. American Society of Manufacturing Engineers

b. American Society of Metallurgical Engineers

c. American Society of Mechanical Engineers

d. American Society of Marine Engineers

Answer: c

13. What does IEEE stand for?

a. Institute for Electrical and Electronics Engineers

b. Institute of Electrical and Electronics Engineers

c. International Electrical and Electronics Engineers

d. Industrial Electricians and Electrical Engineers

Answer: b

14. What does SME stand for?

a. Society of Manufacturing Engineers

b. Society of Mechanical Engineers

c. Society of Materials Engineers

d. Society of Metallurgical Engineers

Answer: a

15. Volunteering is a good way to feel connected to your community.

a. True

b. False

Answer: a

16. Engineering organizations are only for practicing engineers and not for engineering students

a. True

b. False

Answer: b

17. The best time to discuss your graduation plan with your advisor is during the year in which you plan to graduate.

a. True

b. False

Answer: b

18. It's good practice to have your questions formulated and well thought out before you go to see your professor.

a. True

b. False

Answer: a

19. The best use of a study group is to

a. have your questions answered

b. come prepared to discuss appropriate materials

c. receive tutoring

Answer: b

20. Only a few people need to participate in a study group

a. True

b. False

Answer: b

21. It's a good idea to wait until the night before the exam to study

a. True

b. False

Answer: b

22. It's a good idea to study for exams on a daily basis

a. True

b. False

Answer: a

23. Give two reasons why it's important to get to know upper-division engineering students.

24. Describe two benefits of getting involved with a professional engineering organization.

25. Volunteering is a way to develop additional important skills such as communication, management, or supervisory skills that may not be taught in your classes.

a. True

b. False

Answer: a

26. In high school most learning took place inside the classroom whereas in college most of the learning will take place outside the classroom.

a. True

b. False

Answer: b