



Mansoura University
Faculty of Engineering



English 2
Course Code: UNR 032
Key Answer of Mid-Term Exam

Biomedical Engineering Program
Level 000

Exam Date: 17-11- 2016

Allowed Time: 1 Hour

Total: 20 marks

(A) Answer the following questions: (5 marks)

1. Define 'biomedical engineering'.

Biomedical engineering is a branch of engineering which combines engineering principles with medical needs for the enhancement of health care. It is the branch of engineering in which knowledge and skills are developed and applied to define and solve problems in biology and medicine.

2. List the main branches of engineering.

- Civil engineering
- Electrical engineering.
- Mechanical engineering.
- Chemical engineering.
- Biomedical engineering.
- Aerospace engineering.
- Agricultural engineering.
- Petroleum engineering.

3. What is 'electrical engineering'?

Electrical engineering, sometimes referred to as 'electrical and electronics' engineering, is a field of engineering that generally deals with the study and application of electricity, electronics, and electromagnetism.

4. What are civil engineers concerned with?

Civil engineers are concerned with the design and construction of all the nation's constructed facilities. They plan, produce, and help operate the nation's transportation system. They develop water resources. They have a large role in designing the country's environmental protection relating to water, air, and solid wastes. They are involved in housing and urban development. They study the earth's soils and oceans to better serve the human race.

5. What are the main tasks of biomedical engineers?

- Using their experience in biology, medicine, physics, mathematics, engineering science, and communication to make the world a healthier place.
- Developing devices and procedures that solve medical and health problems by combining their knowledge of biology and medicine with engineering principles and practices.
- Doing researches, along with medical scientists, to develop and evaluate systems and products such as artificial organs, artificial devices that replace missing body parts, instrumentation, medical information systems, and health management and care delivery systems.

(B) Which of the following is *true* and which is *false*: (5 marks)

1. Electrical engineers are usually concerned with using electricity to transmit information, while electronic engineers are concerned with using electricity to transmit energy. (false)
2. Agricultural engineering is sometimes called site engineering. (false)
3. Mechanical engineers are concerned with the principles of force, energy and motion. (true)
4. Chemical engineering is the branch of engineering concerned with the design, construction and operation of the plants and machinery used in industrial chemical processes. (true)
5. Civil engineers develop devices and procedures that solve medical and health problems by combining their knowledge of biology and medicine with engineering principles and practices. (false)

(C) Choose the correct answer: (5 marks)

1. His poor health had a bad (affect – effect) on his health.
2. (A large amount of - A great number of) buildings were constructed by civil engineers.
3. (Besides – Beside), I need to tell you about the importance of biomedical engineering.
4. Thomas Edison is a great (invent - inventor) of marvelous invention.
5. To reinforce your paragraph, you should (site – cite) some quotations of famous people.

(D) Identify the one underlined word or phrase A, B, C, or D that should be corrected or rewritten: (5 marks)

1. The amount of women earning Master's Degrees has risen sharply in recent years.
A B C D
2. There is fewer rainfall on the West Coast of the United States than on the East Coast.
A B C D
3. In 1955 the Hawaii was admitted to the Union as the 50th State.
A B C D
4. Water, ice, and snow play a role in affecting an earth's rotation.
A B C D
5. The Rhode island is the smallest state in the United States.
A B C D