

Surgical Technology Chapter 6 Worksheet

Biomedical Science

Name: _____

Date: _____

Instructor: _____

Part I – Vocabulary

Define each term in your own words.

1. Hardware

2. Software

3. Internet

4. Electronic Health Record (EHR)

5. Conductor

6. Insulator

7. Voltage

8. Electrosurgery

9. Laser

10. Robotics

Part II – Fill in the Blank

1. The _____ is considered the "brain" of the computer.
 2. Programs that operate a computer are called _____.
 3. The World Wide Web is used to browse Internet _____.
 4. An e-mail address contains the symbol _____.
 5. Health records transmitted electronically are called _____.
 6. Electricity is the movement of free _____.
 7. Rubber and plastic are examples of electrical _____.
 8. Electrical current is measured in _____.
 9. Power is measured in _____.
 10. Most wall outlets provide approximately _____ volts.
-

Part III – Multiple Choice

1. Which of the following is computer hardware?
 - A. Microsoft Word
 - B. Internet Browser
 - C. Monitor
 - D. E-mail
-

2. Which program is commonly used for creating documents?

- A. Calculator
 - B. Microsoft Word
 - C. Browser
 - D. Search Engine
-

3. Which symbol is found in every e-mail address?

- A. #
 - B. %
 - C. @
 - D. *
-

4. A material that allows electricity to flow is called a:

- A. Resistor
 - B. Conductor
 - C. Insulator
 - D. Circuit Breaker
-

5. Which is an example of an insulator?

- A. Copper
 - B. Water
 - C. Plastic
 - D. Brass
-

6. Direct Current (DC) flows:

- A. In one direction
 - B. In two directions
 - C. Randomly
 - D. Through magnets only
-

7. Alternating Current (AC) is:

- A. Constant
 - B. Reverses direction periodically
 - C. Used only in batteries
 - D. Non-electrical
-

8. Electrosurgery is used to:

- A. Clean instruments
 - B. Cut and coagulate tissue
 - C. Monitor vital signs
 - D. Sterilize equipment
-

9. Which electrosurgical mode is most commonly used?

- A. Bipolar
- B. Monopolar
- C. Ultrasonic
- D. Laser

10. The grounding pad is associated with:

- A. Monopolar electrosurgery
 - B. Robotic surgery
 - C. Endoscopy
 - D. Laser surgery
-

Part IV – True or False

- _____ 1. Hardware refers to the physical components of a computer.
 - _____ 2. EHR stands for Electronic Health Record.
 - _____ 3. Surgical schedules may be stored electronically.
 - _____ 4. Conductors prevent the flow of electricity.
 - _____ 5. Voltage describes electrical potential.
 - _____ 6. A switch opens and closes an electrical circuit.
 - _____ 7. Bipolar electrosurgery is commonly used for coagulation.
 - _____ 8. Laser energy can be used during surgery.
 - _____ 9. Surgical robots eliminate the need for surgeons.
 - _____ 10. Robotics can improve surgical precision.
-

Part V – Matching

Match the term with the correct description.

- _____ 1. CPU

- _____ 2. EHR
- _____ 3. Voltage
- _____ 4. Current
- _____ 5. Laser
- _____ 6. Robot

- A. Electronic patient record
- B. Electrical potential
- C. Computer processing unit
- D. Flow of electric charge
- E. Machine programmed to perform tasks
- F. Light amplification technology

Part VI – Short Answer

1. Explain the difference between hardware and software.

2. How are computers used in healthcare settings?

3. Why is electrical safety important in the operating room?

4. What are the advantages of electrosurgery?

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-
5. Describe one advantage of robotic surgery.

Part VII – Robotics

Fill in the Blank

1. One of the most commonly used robotic systems is the _____ robotic system.
2. The robotic system includes a _____, patient-side cart, and manipulators.
3. Robotic surgery provides _____-dimensional visualization.
4. Robotic systems help eliminate hand _____.
5. Surgical technologists may assist with loading surgical _____ onto robotic manipulators.

Short Answer

What responsibilities may a surgical technologist have during robotic surgery?

Part VIII – Critical Thinking

1. A robotic instrument stops functioning during a procedure. Why is it important for the surgical technologist to understand troubleshooting procedures?

2. Why should healthcare professionals use electronic communication systems appropriately?

3. How can technology improve patient safety in the operating room?

4. Compare one advantage of traditional surgery and one advantage of robotic surgery.

Traditional Surgery:

Robotic Surgery:

Student Reflection

List three new concepts you learned from this chapter.

1. _____
2. _____
3. _____

Worksheet based on Surgical Technology Chapter 6: Biomedical Science.