

Quiz Grade: 85.0% (A)

Quiz Submission

AI in Medical Robotics

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Total Questions: 10

Course Information

Course Title: AI in Medical Robotics
Course Code: SCAME 216
Credit Hours: 3

Quiz Questions, Student Answers, and Correct Answers

Question 1 of 10

Multiple Choice Question

Which of the following is a primary application of AI in medical robotics?

Available Options:

(A) Surgical assistance ← STUDENT SELECTED ← CORRECT ANSWER

(B) Patient scheduling

(C) Billing automation

(D) Inventory management

Student's Answer: Option A: Surgical assistance

Correct Answer: Option A: Surgical assistance

Question 2 of 10

Multiple Choice Question

What is the main advantage of using AI in medical robotics?

Available Options:

(A) Increased cost

(B) Enhanced precision ← STUDENT SELECTED ← CORRECT ANSWER

(C) Reduced learning curve for surgeons

(D) Simplified procedures

Student's Answer: Option B: Enhanced precision

Correct Answer: Option B: Enhanced precision

Question 3 of 10

Multiple Choice Question

Which of the following AI techniques is commonly used for image analysis in medical robotics?

Available Options:

- (A) Natural Language Processing
- (B) Reinforcement Learning
- (C) Convolutional Neural Networks ← STUDENT SELECTED ← CORRECT ANSWER**
- (D) Decision Trees

Student's Answer: Option C: Convolutional Neural Networks

Correct Answer: Option C: Convolutional Neural Networks

Question 4 of 10

Multiple Choice Question

What challenge does AI in medical robotics help to address in remote surgeries?

Available Options:

- (A) Data storage
- (B) Latency ← CORRECT ANSWER**
- (C) Surgeon availability ← STUDENT SELECTED
- (D) Patient consent

Student's Answer: Option C: Surgeon availability

Correct Answer: Option B: Latency

Question 5 of 10

Multiple Choice Question

How does AI improve patient outcomes in robotic-assisted surgeries?

Available Options:

- (A) By reducing surgical and recovery time ← STUDENT SELECTED ← CORRECT ANSWER**
- (B) By eliminating human surgeons
- (C) By increasing the number of surgeries performed
- (D) By increasing hospital revenue

Student's Answer: Option A: By reducing surgical and recovery time

Correct Answer: Option A: By reducing surgical and recovery time

Question 6 of 10

Multiple Choice Question

Which component is NOT typically part of AI systems in medical robotics?

Available Options:

(A) Sensors

(B) Actuators

(C) Blockchain ← STUDENT SELECTED ← CORRECT ANSWER

(D) Machine Learning Algorithms

Student's Answer: Option C: Blockchain

Correct Answer: Option C: Blockchain

Question 7 of 10

Multiple Choice Question

In what way can AI in medical robotics contribute to personalized medicine?

Available Options:

(A) By standardizing treatment plans

(B) By tailoring surgical procedures to individual patients ← STUDENT SELECTED ← CORRECT ANSWER

(C) By reducing the need for diagnostics

(D) By minimizing human involvement

Student's Answer: Option B: By tailoring surgical procedures to individual patients

Correct Answer: Option B: By tailoring surgical procedures to individual patients

Question 8 of 10

Multiple Choice Question

What is a potential ethical concern with AI in medical robotics?

Available Options:

(A) Increased surgical accuracy

(B) Job displacement for healthcare workers ← STUDENT SELECTED ← CORRECT ANSWER

(C) Lower operational costs

(D) Enhanced patient monitoring

Student's Answer: Option B: Job displacement for healthcare workers

Correct Answer: Option B: Job displacement for healthcare workers

Question 9 of 10

Text Answer Question

Discuss how AI in medical robotics can transform surgical procedures.

Student's Answer:

By providing unparalleled precision, personalization and improved patient outcomes

Correct Answer:

AI in medical robotics can transform surgical procedures by enhancing precision, reducing human error, allowing for minimally invasive procedures, and providing real-time data analysis to support decision-making during surgeries.

Question 10 of 10

Text Answer Question

Explain the role of machine learning in the development of autonomous medical robots.

Student's Answer:

Machine learning allows autonomous medical robots to continuously improve their decision making by learning from vast amounts of patient data and real world surgical experience.

Correct Answer:

Machine learning enables autonomous medical robots to learn from vast amounts of data, recognize patterns, and make informed decisions, allowing them to perform complex tasks with minimal human intervention and improving their ability to adapt to new scenarios.

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