Kingdom of Saudi Arabia
Ministry of Education
College of Computer
Department of Computer Engineering

Course Code and Name : Human Computer Interaction COE231
Mid Exam
472 Date: 29-4-2026 Duration:1hour

Student Name:	Student ID:

The exam starts here

Question 1 (5 marks) :

Choose the correct answer

1) Human-Centered Design (HCD) is an approach that prioritizes :
- **a) Following technical specifications strictly.**
- **b) Focusing on human behavior and needs**
- **c) Improving machine performance**
- **d) Increasing the speed of the computer processor**

2) The Conceptual Model is the one that is :
- **a) Created only by the programmer to write the system code**
- **b) Formed in the user's mind to understand how a product works and predict its behavior**
- **c) documentation that comes with a product**
- **d) marketing diagram**

3) The Gulf of Execution is best defined as :
- **a) marketing diagram**
- **b) documentation that comes with a product**
- **c) system image and feedback**
- **d) industrial design and form**

4) A door handle that suggests pulling is an example of a :
- **a) Constraints**
- **b) Mappings**
- **c) Signifiers**
- **d) Feedback**

5) Which type of constraints are based on reasoning?
- **a) Physical**
- **b) Cultural**
- **c) Semantic**
- **d) Logical**

Question 2 (5 marks) :

Write TRUE or FALSE for each of the following statements :

1) Design should align with human limitations.
2) People function efficiently by relying "only" on knowledge in the head
3) people should not blame themselves for difficulties using objects when the fault is in poor design
4) Design Guidelines should focus on perfect accuracy in user interactions and neglect usability
5) Humans often perform routine actions without conscious or deep reflection

Question 3 (4 marks) :

Short Answer Questions :

1. Define **Human-Computer Interaction (HCI)**.

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2. What is **Human-Centered Design (HCD)**?

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3. Explain the difference between **understanding** and **discoverability** in user interface design.

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Question 4 (6 marks) :

Long Answer Questions :

4. Explain the difference between **knowledge in the head** and **knowledge in the world**, with suitable examples (2 points)

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5. A system uses a **USB-A device** and enforces a rule where a password can only be entered a maximum of 3 times. Identify the types of security involved (**physical and logical**) , Explain how each type is utilized in this system. (2 points)

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6. Explain the **levels of human thought process**, illustrating your answer with an example, and describe what happens at each level. (2 points)

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