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

Course Code and Name : Human Computer Interaction COE231
Final Exam
472 Date: 3-6-2026 Duration:2hour

Student Name:	Student ID:

The exam starts here

Question 1 (15 marks) **:**
Choose the correct answer

1) Which of the following is an example of quantitative data ?
   a) User opinions about the interface
   b) User feelings while using the system
   c) Number of users who completed a task successfully
   d) User comments about the design

2) Human-Centered Design (HCD) focuses on:
   a) Technology requirements only
   b) User needs and experiences throughout the design process
   c) Reducing development cost only
   d) Improving system performance only

3) Human-Computer Interaction (HCI) is concerned with:
   a) Hardware manufacturing only
   b) Programming languages only
   c) Users, tasks, and context of use
   d) Computer networks only

4) Which usability attribute helps users recover from mistakes?
   a) Visibility
   b) Error Tolerance
   c) Mapping
   d) Feedback

5) Knowledge in the World refers to :
   a) Information stored in the user's memory
   b) Information available in the environment
   c) User experience only
   d) User expectations only

6) Which method usually collects data from the largest number of participants?
   a) Interviews
   b) Field Research
   c) Surveys
   d) Observation

7) Which research method provides data from users in their natural environment?
   a) Field Research
   b) Laboratory Study
   c) Controlled Experiment
   d) Survey

8) The purpose of evaluation is to:
a) Increase system complexity
b) Assess and improve usability
c) Reduce user involvement
d) Replace requirements gathering

9) A vertical prototype is mainly used to:
a) Evaluate first reactions and detailed interaction in a specific feature
b) Replace the final system
c) Test hardware performance
d) Eliminate user testing

10) Which of the following is an example of feedback ?
a) A button label
b) A system message confirming a successful action
c) A menu structure
d) A physical constraint

11 Requirements describe :
a) The colors used in the interface only
b) What the system should do and provide to users
c) The users' personal preferences only
d) The hardware specifications only

12) Which method is most suitable for understanding why users behave in a certain way?
a) Logs
b) Interviews
c) Automated Reports
d) Analytics

13) Which of the following is considered a usability goal?
a) Profitability
b) Learnability
c) Marketing
d) Advertising

14) Which statement best describes privacy ?
a) Making systems faster
b) Protecting users' personal information and data
c) Improving visual design
d) Reducing system cost

15) Which statement is true about evaluation ?
a) It can only be performed after deployment
b) It can be performed before and after deployment
c) It is only performed by developers
d) It is unnecessary for usability

Question 2 (10 marks) **:**

Write TRUE or FALSE for each of the following statements :

1) Usability without responsibility can make harmful actions easier. ( )

2) Usability cannot be harmful ( )

3) Quantitative data focuses on numbers and measurements ( )

4) Qualitative data focuses on users' opinions and experiences ( )

5) Surveys can reach more participants than interviews ( )

6) Evaluation can be conducted before and after system deployment ( )

7) Feedback helps users understand the result of their actions. ( )

8) Feedback has no benefit to users. ( )

9) HCI is concerned with users, tasks, and context. ( )

10) A prototype can be used to evaluate a design before building the final system. ( )

" ملاحظة : أسئلة الـ MCQ و (T/F) هنا تقريبية وليست نفسها الي جت في الاختبار، لكنها تغطي نفس الأفكار، وكانت أسئلة الاختبار الفعلية واضحة ومباشرة "

Question 3 (10 marks) :

Short Answer Questions :

1. Mention three types of design constraints and explain how each affects usability.

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2. What is the difference between Quantitative Data and Qualitative Data ?

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3. What is the difference between the Gulf of Execution and the Gulf of Evaluation?

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4. Give two examples of harm that may result from poor design.

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Question 4 (15 marks) **:**

Long Answer Questions :

1- Compare Affordance, Signifier, and Feedback, and provide an example for each.

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2. Compare Field Research, Interviews, Surveys, and Logs in terms of their strengths, weaknesses, and when each method is used

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3. A person is using a printer for the first time. The person is accustomed to the green button having a specific meaning based on previous experience. When trying to use the printer, the person could not complete the task and the printer did not provide any message or indication that an error had occurred. Based on this scenario, identify the knowledge in the head and the knowledge in the world, then suggest two design solutions that could improve the usability of the printer.

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