



**FINAL EXAMINATION**  
**MARCH 2024**

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<b>COURSE TITLE</b>	<b>INTRODUCTION TO HUMAN COMPUTER INTERACTION</b>
<b>COURSE CODE</b>	<b>RCIT1223</b>
<b>DATE/DAY</b>	<b>20 JUNE 2024 / THURSDAY</b>
<b>TIME/DURATION</b>	<b>02:00 PM - 04:00 PM / 02 Hour(s) 00 Minute(s)</b>

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(This Question Paper consists of 11 Printed Pages including front page)

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**This question paper consists of TWO (2) sections in this examination paper. Please answer ALL questions in the answer booklet provided. [70 MARKS]**

**SECTION A**

**(40 Marks)**

**There are FORTY (40) questions in this part of the examination paper. Answer ALL question in the answer booklet.**

1. HCI stand for \_\_\_\_\_.
  - A. Human Computer Interface
  - B. Human Computer Interaction
  - C. Human Computer Implementation
  - D. Human Computer Industry
  
2. Which one of these would **NOT** be found in a good HCI?
  - A. Common short cuts, like CTRL+Z for undo.
  - B. Icons that can have specific meanings.
  - C. A long command line to achieve a function
  - D. Sounds that convey meanings.
  
3. In virtual reality which of the senses cannot currently be portrayed?
  - A. Touch
  - B. Hearing
  - C. Sight
  - D. Smell
  
4. Which one of these is a good reason for taking care to design a good computer human interface?
  - A. Not every user is a computer expert
  - B. Well designed HCIs allow the software to be sold at a better price.
  - C. Well designed HCIs use less computer resources.
  - D. Well designed HCIs allow the computer to run faster.

5. The goals of HCI are \_\_\_\_\_.
- A. usability and user experience
  - B. learn ability and comfort
  - C. tasks and goals
  - D. none of the above
6. Human computer interaction is a core subject of \_\_\_\_\_.
- A. psychology
  - B. software engineering
  - C. anthropology
  - D. history
7. HCI deals with \_\_\_\_\_.
- A. design of interactive system only
  - B. evaluation of interactive system only
  - C. implementation of interactive system only
  - D. all of the above
8. Human beings interact with outside world, using their \_\_\_\_\_.
- A. input channels
  - B. output channels
  - C. sense of sight
  - D. all of the above
9. \_\_\_\_\_ plays a role to bridge up the gap between the interfaces of machines and human understanding.
- A. Human
  - B. Computer
  - C. Human Computer Interaction
  - D. None of the above

10. Usability testing works for \_\_\_\_\_.
- A. software products
  - B. hardware products
  - C. all products
  - D. none of the above
11. Participants for usability testing should be chosen based on \_\_\_\_\_.
- A. background in computing
  - B. experience with the task
  - C. ability with the natural language used in the interface
  - D. all of the above
12. Which of the given statements correctly defines effectiveness in terms of one of the usability goals?
- A. It is a very general goal and refers to how good a system at doing what it is supposed to do.
  - B. It refers to the way a system supports users in carrying out their tasks.
  - C. It involves protecting the users from dangerous conditions.
  - D. It involves protecting the users from undesired situations.
13. The command line interface is used because \_\_\_\_\_.
- A. it is easy to understand
  - B. it is demanded by DOS
  - C. it is offered by Unix systems
  - D. it is powerful and flexible
14. All of the following are good guidelines for the use of icons **EXCEPT**.
- A. Represent the object or action in a familiar and recognizable manner.
  - B. Carefully consider three-dimensional icons; they are eye catching but also can be distracting.
  - C. Limit the number of different icons.
  - D. Make the icon blend in with its background.

15. Augmented reality is \_\_\_\_\_.
- A. the same thing as virtual reality
  - B. a type of dashboard displaying a large volume of information at one time
  - C. an innovation in which users see the real world with an overlay of additional information
  - D. the use of haptic interaction skills to manipulate objects and convert the physical form to a digital form
16. Which one of the following is an example of virtual reality?
- A. Flight simulator
  - B. Board games
  - C. Microsoft Office
  - D. X-ray eyeglasses
17. Which are the most significant senses for the average person when it comes to interacting with a computer?
- A. Sight and hearing
  - B. Hearing, touch and smell
  - C. Hearing and touch
  - D. Sight, hearing and touch
18. Example of form fill interface is \_\_\_\_\_.
- A. a dialog box
  - B. pop up menus
  - C. data entry form on some university web
  - D. none of the answers
19. Ali wants to develop an application that incorporates print, audio video media and software applications on a single place. Which of the following will help in this regard?
- A. MS Word
  - B. Worldwide Web
  - C. Television and newspaper
  - D. None of the answers

20. Which of the following is **NOT** true about menu selection?
- A. Encourages exploration
  - B. Shortens learning
  - C. Reduces keystrokes
  - D. Provides a clear structure to decision making
21. What term refers to the process of designing interactive systems to optimize the interaction between humans and computers?
- A. Algorithmic Optimization
  - B. Data Analysis
  - C. User Interface
  - D. Network Protocol
22. User output in human computer interaction is occurred through \_\_\_\_\_.
- A. motor controls
  - B. experience
  - C. senses
  - D. education
23. Which of the following device cannot be useful for a visually impaired person?
- A. a typical keyboard
  - B. a typical monitor
  - C. a typical speaker
  - D. a typical keyboard processor
24. Which of the given statements correctly defines effectiveness in terms of one of the usability goals?
- A. It is a very general goal and refers to how good a system is at doing what it is supposed to do
  - B. It refers to the way a system supports users in carrying out their tasks
  - C. It involves protecting the users from dangerous conditions
  - D. It involves protecting the users from undesired situations

25. Which of the following best describes usability testing?

- A. Evaluating the visual design of a website or application
- B. Assessing the speed and performance of a software system
- C. Testing the ease with which users can interact with a product to achieve their goals
- D. Analyzing the security features of an online platform

26. According to many experts, how many users should be included in a usability test?

- A. Seven plus or minus two (5-9 users)
- B. Between 5 and 12, depending on the system needs
- C. A large enough sample of users to perform statistical tests
- D. At least 10 users

27. Use of eye-tracking devices is a way to do \_\_\_\_\_.

- A. black box testing
- B. white box testing
- C. usability testing
- D. story board

28. Which of the following statements is **NOT** true about feedback?

- A. Feedback is usually distracting and annoying to users.
- B. For every user action, there should be system feedback.
- C. Harsh sounds are appropriate for rare emergency feedback.
- D. Informative feedback at the completion of a group of actions gives operators the satisfaction of accomplishment.

29. Which one of these is a good reason to include sounds in an HCI?

- A. Users react more quickly to sounds than to visual signals
- B. Users react more slowly to sounds than to visual signals
- C. There is no preference. People just like sounds
- D. The computer reacts to sounds in the same way as a human

30. A computer expert produces a solution with HCI which is very efficient in computer resources, based on command-lines. Which one of the following is most likely to be the result when the system is implemented?
- A. It will be welcomed by all staff.
  - B. All staff will enjoy using it after mastering the skills of command lines.
  - C. Most staff will want to become computer experts to use it.
  - D. Most staff will feel demoralized and will not want to use the system.
31. \_\_\_\_\_ is/are the principal interaction mode for a Nintendo Wii system.
- A. Gesture and body movements
  - B. Haptic (touch) interface
  - C. Exploring and browsing
  - D. Infrared position detection.
32. \_\_\_\_\_ field is not an influence on Human Computer Interaction (HCI).
- A. Ergonomics
  - B. Cognitive psychology
  - C. Computer science
  - D. All of the above are an influence on HCI
33. You are running a user test session and your participant wants to leave half way through the session. What do you do?
- A. Ask them to stay until the end as planned, so you can collect your data.
  - B. After ensuring they do not need medical help, let them leave, with your thanks.
  - C. Offer them an incentive payment to encourage them to finish the session.
  - D. Refuse to let them leave until they have finished the session.
34. Identify the characteristics of slider and alphaslider.
- A. Ranges
  - B. Multiple levels
  - C. Numerical values
  - D. All of the above



35. Describe the characteristics of tree-structured menus that can be deployed in the interface.

- I. Characteristics of tree-structured menus
- II. Fast retrieved if natural and comprehensive
- III. Use terminology from the task domain
- IV. Expanding menus maintain the full context of each choice

- A. I, II and IV
- B. II, III and IV
- C. I, III and IV
- D. I, II, III and IV

36. Advantages of using menu maps are effective for providing overviews to minimize user disorientation.

- A. True
- B. False

37. What are the THREE (3) elements of Human Computer Interaction.

- I. Guidelines
- II. Principles
- III. Theories
- IV. Technical

- A. I, II and IV
- B. II, III and IV
- C. I, II and III
- D. I, II, III and IV

38. What is the definition of guidelines?

- A. Mid-level strategies or rules to analyze and compare design alternatives.
- B. Low-level focused advice about good practices and cautions against dangers.
- C. High-level widely applicable frameworks to draw on during design and evaluation, as well as to support communication and teaching.
- D. None of the above.

39. Identify **THREE (3)** design constraints in HCI.

- I. Smaller screen size
- II. Touch data entry can cause errors
- III. Show high-level information
- IV. Battery-power limitations

- A. I, II and IV
- B. II, III and IV
- C. I, III and IV
- D. I, II and III

40. What is the similar name for teleoperation?

- A. Telephone
- B. Telerobotics
- C. Telegram
- D. None of the above

  
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**SECTION B**

**(30 Marks)**

**There are FIVE (5) questions in this part of the examination paper. Answer ALL question in the answer booklet.**

1. List **FOUR (4)** pillars of design in HCI. (8 marks)
  
2. Identify **FIVE (5)** examples of expert review methods. (10 marks)
  
3. Identify **THREE (3)** positive feelings associated with good user interfaces. (3 marks)
  
4. Identify **THREE (3)** examples of binary menus. (3 marks)
  
5. There are **four** components that can attract user's attention. Please explain **TWO (2)** components only. (6 marks)

**\*\*\* END OF QUESTIONS PAPER \*\*\***