

KATHMANDU UNIVERSITY
End Semester Examination
February/March, 2019

03 MAR 2019

Level : B.Sc.
Year : III
Time : 2 hrs. 30 mins.

Course : COMP 341
Semester : II
F. M. : 40

SECTION "B"

[6 Q. × 4 = 24 marks]

Attempt ANY SIX questions.

1. Define *user interface*. What are the key things you need to address to develop *usable products*?
2. Differentiate between *Gulf of Execution* and *Gulf of Evaluation* with suitable examples.
3. What is *think aloud* method? Explain the applications of *think aloud* method.
4. Mention different *Potential Abbreviation Strategies* during designing a user interface?
5. Why do you think *expert review* is necessary for evaluation of an interface design? What are the drawbacks of *experts review* during evaluation of an interface design?
6. What is meant by *GOMS*? Give an example.
7. Explain different kinds of *display technologies*.

SECTION "C"

[2 Q. × 8 = 16 marks]

Attempt ANY TWO questions.

8. Define *cognitive walkthrough*. Briefly explain 7 stages of *Donald Norman's model* in interaction.
9. Choose an appropriate evaluation method for each of the following situations: In each case, identify:
 - i. The participants
 - ii. The techniques used
 - a. You are at an early stage in the design of a spreadsheet package and you wish to test what type of icons will be easiest to learn.
 - b. You have a prototype for a theatre booking system to be used by potential theatre-goers to reduce queues at the box office.
 - c. You have designed and implemented a new game system and want to evaluate it before release.
 - d. You have been asked to develop a system to store and manage student exam results and would like to test two different designs prior to implementation or prototyping.
10. Write short notes on:
 - a. Fitt's law
 - b. Mobile device displays
 - c. Discrete word recognition
 - d. Speech recognition



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Mark Scored:

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F. M. : 10

Registration No. :

Date :

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SECTION "A"

[20Q. × 0.5 = 10 marks]

Tick [✓] the most appropriate answer.

1. Which of the following sentence is false in case of Thinking aloud testing?
 slows down the user by about 17%
 cannot provide performance data
 cannot provide process data
 is a formative evaluation method
2. Direct-control pointing is primarily targeted to
 Novice users Intermittent users Experts Children
3. Which of this is an attribute of usability?
 Portability Usefulness
 Generalisability Subjective satisfaction
4. Which of the following fields is not an influence on HCI?
 ergonomics cognitive psychology
 computer science all of the above are an influence on HCI
5. GOMS stands for _____
 goals, operations, methods and selection rules
 goals, objects, models and selection rules
 goals, operations, methods and state role
 goals, orientations, models and state role
6. In a heuristic evaluation _____
 a group of usability experts judges an interface with a detailed checklist of guidelines.
 a group of test users conducts a formal experiment.
 a group of psychologists administers a questionnaire.
 a group of usability experts reviews a user interface according to a small set of general principles.
7. Which one of these is a good reason to include sounds in an HCI?
 Users react more quickly to sounds than to visual signals
 Users react more slowly to sounds than to visual signals
 There is no preference. People just like sounds
 The computer reacts to sounds in the same way as human

8. Which of these is not an interface style?
 Command line/command prompt Menus
 Natural Language Voice Recognition
9. Which of the following is not one of the goals of HCI?
 To produce usable systems To produce safe systems
 To produce non-functional systems To improve effectiveness of the systems
10. The gulf of execution refers to _____
 The user's difficulty in understanding the feedback from the system
 The system's difficulty in presenting information in the output language
 The system's difficulty in converting an input expression into the correct system state transition
 The user's difficulty in formulating and articulating an intention to the system
11. Which of the following is goal of usability?
 Effectiveness Efficiency Safety Security
12. _____ capture the non – verbal dialogue between artifact and user over time.
 Persona Scenario Dialogue Design model
13. Which of the following statement is not appropriate in knowing the user in the usability engineering lifecycle?
 Draw up a user profile
 Run a think aloud test
 Assume the role of an apprentice learning from the master craftsman
 Observe representative users
14. Certain factor that helps us to interact with graphical based systems is _____
 Indirect Manipulation Direct Manipulation
 Command Language Graphical User Interface
15. Which of the following is least likely to be revealed by a paper prototype?
 Your users don't know the term algorithm
 Toolbar button are too small to press
 Navigation button needs to be enlarged
 The help menu isn't in the right place
16. Your new sound card is packaged in a plastic anti-static bag. The bag is sealed with a yellow sticker with a written warning not to expose the card to static electricity. The sticker is an example of _____
 logical constraint cultural constraint
 physical constraint both cultural and physical constraint
17. Scripting (the ability to record and play back programmable sequences of actions) is an example of _____
 Speaking the user's language
 Allowing the user model to grow
 The "recognition rather than recall" principle
 A mode in the user interface design

03 MAR 2019

18. Which of the following does not count as one of the advantages of computer?
- Depending so much on computers may give fatal results
 - Leading to efficiencies
 - Making our life convenient
 - Computers are enabling new discoveries
19. User and the system has its own unique language, the language used by the user is called _____
- Core
 - Command language
 - Natural language
 - Task
20. Which one of these would NOT be found in a good *HCI*?
- Common short cuts, like CTRL+Z for undo
 - Icons that have specific meanings
 - Sounds that convey meanings
 - A long command line to achieve a function

