# ARAB ACADEMY FOR SCIENCE AND TECHNOLOGY

## **COLLEGE OF COMPUTING AND IFORMATION TECHNOLOGY**

# Course Title: HCI Lecture: Prof. Dr. Hatem Abdelkader

# Course Code: Time allowed: 60 minutes

Student Name:

# 7th Week Exam

# Spring 2018/2019

***Answer all the following questions***

Question one (MCQ) (Answer 12 points only)

1- Each question has FOUR possible answers. Circle the letter of the best answer for each question.

1. Which of the following fields is not an influence on HCI?

(a) Ergonomics

(b) Cognitive psychology

(c) Computer science

(d) All of the above are an influence on HCI

2. Scripting (the ability to record and play back programmable sequences of actions) is an example of:

(a) Speaking the user's language

(b) Allowing the user model to grow

(c) The recognition rather than recall\_ principle

(d) A mode in the user interface design

3. An icon of a file folder, which users can drop \_les on in order to move them into the folder, is an example of which of the following: [

(a) The recognition rather than recall principle

(b) Direct manipulation

(c) A metaphor

(d) all of the above

4. You drag a folder to make a copy of its contents. An animation appears on the screen, showing \_les moving from one folder to another. This is an example of which of the following:

(a) Visibility

(b) Mapping

(c) An affordance

(d) Feedback

5. 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:

(a) Perceptual constraint

(b) Cultural constraint

(c) Physical constraint

(d) Logical constraint

6. Which of the following statements is false?

(a) Norman's logical constraints are one way to implement Nielsen's principle of error prevention.

(b) The help and documentation called for by Nielsen's usability principle form part of Norman's definition of the system image.

(c) Norman's principle of feedback is one way to implement Nielsen's principle of recognition rather than recall.

(d) All of the above statements are true.

7. Which of the following statements is true?

(a) Violating Norman's feedback principle interferes with the fourth stage of Norman's Seven Stages of Action.

(b) There is no ethical way to collect data about people without their informed consent.

(c) Structured interviews are less likely to miss salient details than un-structured ones.

(d) All of the above statements are false.

8. Which of the following gestures makes use of a quasi-mode?

(a) Selecting one of the commands (draw, spray paint, etc.) in the tool palette of a paint program.

(b) Using the Ctrl-V shortcut to paste text.

(c) Clicking a link in a web browser.

(d) All of the above make use of quasi-modes.

9. Unlike traditional observation, guided observation:

(a) Sets strict guidelines for session activities

(b) Reduces error introduced by the experimenter

(c) Sets strict guidelines for session lengths

(d) Includes some interaction with participants

10. The Num Lock key found on many keyboards, which enables the user to use the number functions of the numeric keypad rather than the cursor control functions, indicates which of the following features is present:

(a) A mode

(b) A quasi-mode

(c) A physical constraint

(d) A logical constraint

11. As we have used the terms in this course, what is the relationship between tasks, actions, and goals?

(a) A task is composed of goals and actions to accomplish those goals

(b) An action reifies a task into a goal

(c) A goal is composed of a set of actions that accomplish a task

(d) None of the above

12. The Num Lock key found on many keyboards, which enables the user to use the number functions of the numeric keypad rather than the cursor control functions, indicates which of the following features is present:

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13-What is an important advantage of command-line interfaces over graphical user interfaces?

(a) The mental load for the user is low (recall over recognition).

1. The user is not distracted by an abundance of menus, icons, toolbars, etc.
2. They work well for repetitive jobs like payroll processing or billing.
3. Complex operations can be performed more efficiently, e.g. through command languages.

14- Why should modal dialog boxes be used with care?

1. They are very disruptive and prevent users from continuing their task.
2. They have high resource requirements on the computer system.
3. They frequently lead to application or system crashes.
4. They are difficult to program because they have to work across applications.

15- Under which circumstances is the use of CAPITAL LETTERS appropriate in screen layout and design?

1. Never, because text in capital letters is more difficult to read.
2. To better distinguish text from the numbers when text and numbers are mixed.
3. To emphasize important items like field names, titles, or main categories.
4. It should be used as often as possible because it reduces the number of bits required for the representation of character

**Question Six**

1. **What is usability? What are the features of the useable system?**

2- **What are the seven stages of Donald Norman’s model?**

**3- What is the difference between slips and mistakes?**

**4- Define Ergonomics and clarify your definition by examples?**

**5- Give the differences between virtual reality and augmented reality?**

**6- Draw a block diagram for BCI systems**

**7- Give four Common interaction styles**