**Last Sheet**

**HUMAN COMPUTER INTERACTION QUESTIONS**

1. Which of the following are the components of the HCI approach to design?



1. Tasks
2. Usability
3. Humans
4. Technology



2. HCI draws which of the fields together?



1. Psychology
2. Literature
3. Design
4. Computer Science



1. Which of the following is the most likely interface metaphor used by a smartphone calendar?
   1. Take-out Menu
   2. A paper diary
   3. Mobile Technology
   4. A touchscreen
2. What is the major difference between the two websites?



1. Background colour
2. The first website provides control over number of results
3. The second website only contains UI components which are essential
4. The second website has a better color scheme

5. Which one of these would not be found in a good HCI?

1. Icons that can have specific meanings
2. Common shortcuts, like CTRL+Z for undo
3. Sounds that convey meanings
4. A long command line to achieve a function

6. What is the principal interaction mode for a Microsoft Kinect?

1. Haptic Interface
2. Mouse Pointer
3. Exploring and Browsing
4. Gesture and Body Movements

7. **“**Good Design is just cool graphics**”**

True False

8. Which of the following statements is true?

1. A good UI design doesn**’**t save money as it is expensive
2. Bad UI design doesn**’**t really affect the reputation of the company
3. A good UI design saves time and effort
4. The UI design doesn**’**t matter as long as the product is great
   1. Which of the following is not true about a good design?
5. Everything designed has an explicit criterion such that the design is useful and usable
6. Everything is designed keeping a vague context in mind
7. Both of the above
8. None of the above
9. Identify the "interaction" component out of the HCI components (i.e. humans, computer, and interaction) in the following scenario:

*A doctor performs an ultrasound on the ultrasound machine using the handheld device.*

1. A doctor
2. performs an ultrasound
3. the ultrasound machine
4. the handheld device

11. What are the goals of a good design?

1. Safety
2. Utility
3. Efficiency
4. All of the above

12. What does the Eyedropper tool do?

1. Paints a single dot of color
2. Picks/Selects the color at the cursor
3. Creates a histogram of the area around the cursor
4. Fades the colors of an area centered on the cursor

13. Which of the following techniques can teach you a few things about a thousand people?

1. Cognitive walkthrough
2. Market Research
3. Affinity Diagram
4. Contextual inquiry

14. Which of the following is/are true for contextual inquiry?



1. With contextual inquiry, you learn a few things about a thousand people
2. With contextual inquiry, you learn a thousand things about a few people
3. Focus is on what people say
4. Focus is on what people do



15. Which of the following things does Market research helps you learn?

1. Why are users doing something
2. A large variety of things about a thousand people
3. How people do something
4. What people say

16. Which of the following statements is/are true?



1. Users may sometimes do things without any reason
2. Nothing a user does is for no reason
3. Users do not always know what they want
4. Sometimes the behaviour of users can be unique to them 17. Contextual Inquiry requires the HCI expert to:-



1. Intervene the user when he does something incorrect
2. Make sure the user doesn**’**t think aloud while using the product
3. Ask the users to summarize their reactions
4. Steer the conversation to stay on relevant topics

18. Contextual inquiry is a quick form of which of the following techniques?

1. Psychology
2. Ethnography
3. Focus Group Discussions
4. None of the above
5. Which of the following is/are a part of the general process of making an affinity diagram?



1. One key concept or observation per sticky note
2. Cluster similar items as you go
3. Label emerging themes
4. Decide the themes of clusters in the beginning 20. Choose the option with the correct order.



1. Cognitive walkthrough -> Affinity diagram -> Contextual inquiry
2. Cognitive walkthrough -> Contextual inquiry -> Affinity diagram
3. Contextual inquiry -> Affinity diagram -> Cognitive walkthrough
4. Affinity diagram -> Contextual Inquiry -> Cognitive walkthrough

21. Which of the following is an aspect of conducting a Contextual Inquiry?

1. Using recording techniques
2. Taking permission from the Institutional Review Board
3. Having the users sign a consent form
4. All of the above
5. To reposition an image in a layer, you would click the layer listing on the Layers panel, then drag the image with which tool?
6. Selection tool
7. Hand tool
8. Move tool
9. None of the Above

23. Understanding why a user does things in a certain way by asking them questions related to the use case of the application, signifies which of the following?

1. Focus Group Discussion
2. Contextual Inquiry
3. Market research
4. Affinity Diagram

Which of the following is true about the process of drawing Affinity Diagrams?

1. It is immersive
2. It is persistent
3. It involves brainstorming
4. All of the above

24. Clicking and holding the mouse button or Right-clicking on a toolbar icon does what?

1. Increases the size of that tool
2. Locks that tool as the default action
3. Reveals help text for that tool
4. Shows additional tools related to that tool

25. If a user is in your lab and you need to use [lookback.io](http://lookback.io/) for user testing, you will use:

1. Live Moderated Testing
2. Unmoderated Self-Testing
3. In-Person Testing
4. None of the above
5. If you need to perform a interactive Task Analysis of your app and you need to use [lookback.io](http://lookback.io/) for user testing, you will use:
6. Live Moderated Testing Unmoderated Self-Testing
7. In-Person Testing
8. None of the above

27. If you need to give the user some fixed context and then let them understand your app themselves, and you would use \_\_\_\_\_\_ on [lookback.io:](http://lookback.io/)

1. Live Moderated Testing
2. Unmoderated Self-Testing
3. In-Person Testing
4. None of the above

28. Using [lookback.io,](http://lookback.io/) you can:

1. Have an interactive call
2. Rewatch previous interviews
3. Conduct interviews without consent
4. Invite collaborators to join the interview

29. An IRB proposal allows the committee to check which of the following:-

1. Will the study lead to a feasible result
2. What kind of data is being collected
3. Are the researchers qualified to conduct the study
4. Who are the participants in the study

30. On the basis of which of the following would you reject an IRB proposal

1. The amount being paid to the subjects is not reflective of their effort
2. The gender distribution of the study is not equal
3. There might be a degree of psychological risk to the participants
4. All of the above

31. Which of the following requires explicit signature of the IRB?

1. Flier
2. Consent Form
3. Both a & b
4. Neither a, nor b

32. Which of the following information you should include in an IRB proposal?

1. How will the subjects be recruited for the study
2. What is the long-term goal of the research
3. A summary of the study
4. How will the data collected in the study be useful

33. Which of the follow is/are **NOT** an important part of the IRB proposal?

1. Goals of the research
2. Biographies of the researchers conducting the study
3. Confidentiality of the data
4. Results of the pre-experimental questions

34. Which of the following discussed in the lecture is analogous to an end user license agreement?

1. IRB proposal
2. IRB application
3. Flier
4. Pre and Post experimental questions
5. Consent Form

35. Why are pre-experiment questions important in a study?

1. They allow debriefing the user about the goals of the study
2. They help decide if your participant is feasible for the study
3. They help ascertain if the subject is just doing the study for the money
4. None of the above
5. Which of the following buttons can be found in the Material Design Library of proto.io:
6. Action Button
7. Raised Button
8. Round Button
9. Icon Button

37. To add resources like images to proto.io project, it must be dragged and dropped into the \_\_\_\_\_\_\_\_ window

1. Project Asset
2. Layers
3. Images
4. Inspector

Proto.io does not have default preset option to create prototypes for:

1. Smart Phone
2. Smart TV
3. Smart Watch
4. Web Desktop

38. Which of the following tools/services are not compatible with proto.io:

1. Photoshop
2. Dropbox
3. Illustrator
4. Lookback

39. Which of the following should an HCI expert take care of while designing a product?

1. You can make as many assumptions as possible
2. If it's not obvious to the users, it**’**s always their fault
3. You should not think yourself as a typical user
4. The end user is never a beginner

40. An HCI expert needs to be careful about which of the following

1. Users hijacking a discussion during an interview
2. Users deliberately providing incorrect information during a survey
3. Users hijacking a discussion during an FGD
4. All of the above
5. Both a and c
6. None of the Above

41. Why do we need a Survey?

1. To narrow down the data collection for your problem
2. Collecting qualitative data
3. To understand the needs of a large set of users
4. Statistical representation of the population of interest

42. Which of the following is a mode of conducting surveys?

1. Telephone
2. Web
3. Hybrid
4. All of the above

43. Which of the following issues occur in personal surveys?

1. Surveys are unnecessarily long
2. Time consuming
3. Low response rate
4. Users may be biased due to the presence of the interviewer

44. Which of the following survey techniques has the lowest response rate

1. Email
2. Telephone
3. Personal
4. Web

45. Which of the following is true about closed questions?

1. Closed questions are easy to code because they are not mutually exclusive
2. They might introduce bias in the study
3. Closed questions are time saving
4. They allow for greater creativity than open ended questions

46. Which of the following is **NOT** true about open-ended questions?

1. They are easy to analyze
2. Allow users to express their ideas without restriction
3. They incur greater time cost, compared to closed questions
4. All of the above

47. Which of the following questionnaire designs are particularly useful for exploratory studies?

1. Closed questions
2. Hypothetical questions
3. Questions with mutually exclusive options
4. Open-ended questions

48. Which of the following techniques can be used to understand the needs of a user?

1. Focus Group Discussions
2. Interviews
3. TV advertisements
4. None of the above
5. Which of the following can help you understand the mistakes that you**’**ve made in questionnaire design as well the mistakes users are making in providing responses to the questions?
6. Focus Group Discussions
7. Cognitive walkthrough
8. Survey
9. Pilot study

50. Choose the option with the most optimal order

1. Focus Group Discussions -> Interviews -> Surveys
2. Surveys -> Focus Group Discussions -> Interviews
3. Surveys -> Interviews -> Focus Group Discussions
4. Interviews -> Focus Group Discussions -> Survey
5. Which of the following factors **DOES NOT** govern the choice of the survey mode?
   1. Time and budget constraints
   2. Quality of the experts that will evaluate the survey
   3. The response rate desired
   4. The complexity of the questions to be asked
6. Which of the following instances illustrates **‘**cognitive walkthrough**’**?
7. Talk to the users about their needs
8. Consult the experts
9. Imagine yourself as the user and think from their perspective
10. None of the above

53. What type of questions should one avoid in a questionnaire?

1. Double negatives
2. Leading questions
3. Demographic questions
4. Overlapping response categories

54. What is/are the goal/s of Task Analysis?

1. To determine the tasks that the actual users of the product are most likely to perform
2. To determine how often are the tasks performed
3. To identify the tasks that the developers of the product designed into the product
4. To identify the time constraints on the tasks
5. Which of the following can be classified as a difficult task while navigating on an e-commerce website?
6. Create an account/Login
7. Cancel a purchase
8. Find a product and add to cart
9. Checkout and proceed to purchase

56. Which of the following was one of the problem with the Stanford Prison Experiment?

1. Violation of participants**’** privacy
2. Ethical issues - severe repercussions on the participants
3. Participants were not given enough time for the task
4. Participants found the task very easy

57. Which of the following could be an example of a question in task analysis?

1. What is your occupation?
2. Under what situations will you use an app like this?
3. Have you used a similar app?
4. How would you change your profile picture in this app?

58. What is an ideal composition of tasks in a task analysis?

1. All easy tasks
2. All difficult tasks
3. A mix of easy, moderate and difficult tasks
4. More easy tasks and less difficult tasks

59. The prototyping phase follows after which of the following steps?

1. Evaluation
2. Building the application
3. Understanding users needs
4. None of the above

60. Why is prototyping essential?

1. To get quick feedback on the product/application
2. None of the above
3. Experiment with multiple alternatives
4. It saves money and effort

61. Paper and pen based sketches used for prototyping signifies which of the following?

1. Rapid prototyping
2. High-fidelity prototyping
3. Low-resolution prototyping
4. Low-fidelity prototyping

62. Which of the following statements is/are true?

1. It is easier to incorporate user feedback during high-fidelity prototyping compared to low-fidelity prototyping
2. It requires more effort and resources to incorporate user feedback during high-fidelity prototyping
3. It is easier to incorporate user feedback during low-fidelity prototyping compared to high-fidelity prototyping
4. It requires more effort and resources to incorporate user feedback during low-fidelity prototyping

63. Indicate whether the following statement is true or false:

**“**Low-fidelity prototyping requires more precision than high-fidelity prototypingbecause that is when the major structure of the application is being designed

1. True
2. False

64. Which of the following is true about good design?

1. Good design is just cool graphics
2. Good design is just common sense
3. Good design comes from an iterative process with the user in loop
4. Good design can come from fixing the UI at the end

65. Which of the following is true about Waterfall strategy?

1. Waterfall strategy is optimal for user experience
2. It is infeasible because it is difficult to adapt
3. Waterfall strategy implies that testing should be done all at once
4. Waterfall strategy uses a fail fast approach

66. The following describes the Iterative Design process:

1. Design-Code-Launch
2. Design-Prototype-Launch
3. Design-Prototype-Evaluate
4. Design-Evaluate-Code

67. For user testing on your low fidelity prototypes, you will:

1. Antagonise the user if they are unable to figure out your design
2. Give them an in depth explanation of the product so that they know everything before looking at your design
3. Give a brief overview of your ideas and then let them explore/figure out your design
4. All of the above

68. Which of the following should not be a part of your low-fidelity process?

1. A black and white layout
2. Creating a colourful logo for your app
3. Paper cutouts
4. Deciding on a colour scheme
5. You want to test the intuitiveness of the functionality of the application. For this task, you will use:
6. Low fidelity prototypes
7. High fidelity prototypes
8. Waterfall prototypes
9. You want to test whether the colour scheme of the application is appropriate. For this task, you will use:
10. Low fidelity prototypes
11. High fidelity prototypes

71. Which of the following are downsides of high fidelity prototyping?

1. Users give a lot of feedback about functionality of the application
2. Users focus too much on minute details like logo
3. Building high fidelity prototypes is time consuming
4. Users don**’**t like high fidelity prototypes

72. User-Centered Design is important because:

1. The users need to be taught to use the design
2. The design should be intuitive enough for users
3. The design should cater specifically to the needs of the users
4. It is necessary to know the user environment while building a design

73. Which of the following is/are a step in the waterfall strategy?

1. Requirements specification
2. Prototyping
3. Integration and Testing
4. Coding

**Last HCI Lecture Sheet**

**Dr. Hatem 2019**

**Define Inspections:**

* Experts use their knowledge of users & technology to review software usability
* Expert critiques can be formal or informal

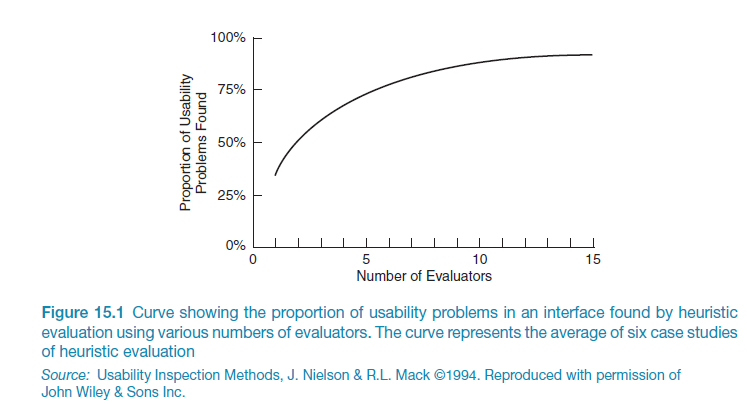
**Define Heuristic evaluation:**

* Heuristic evaluation is a review guided by a set of heuristics

**Nielsen’s original heuristics:**

* Visibility of system status.
* Match between system and real world.
* User control and freedom.
* Consistency and standards.
* Error prevention.
* Recognition rather than recall.
* Flexibility and efficiency of use.
* Aesthetic and minimalist design.
* Help users recognize, diagnose, recover from errors.
* Help and documentation.

**Show by Drawing how design evaluators & problems are related to each other:**



**How Many Evaluators Needed and How Many Users Needed to find usability problems?**

* Nielsen suggests that on average 5 evaluators identify 75-80% of usability problems.
* Cocktonand Woolrych (2001) point out that the number of users needed to find 75-80% of usability problems depends on the context and nature of the problems.

**Heuristics for websites focus on key criteria:**

* Clarity
* Minimize unnecessary complexity & cognitive load
* Provide users with context
* Promote positive & pleasurable user experience

**3 stages for doing heuristic evaluation**

* Briefing session to tell experts what to do.
* Evaluation period of 1-2 hours in which:

Each expert works separately;

Take one pass to get a feel for the product;

Take a second pass to focus on specific features.

* Debriefing session in which experts work together to prioritize problems.

**Advantages and Problems of heuristic evaluation  
  
Advantages:**- easy to use, fast and as cheap as you want it.  
- it is fairly easy to generate fixes.  
- It is a good method for finding both major and minor problems in a user interface.  
- can be employed early in the design life cycle to find usability problems.  
  
**Disadvantages:**

* Few ethical & practical issues to consider because users not involved.
* Can be difficult & expensive to find experts.
* Important problems may get missed;
* Many trivial problems are often identified;
* Experts have biases.

**Compare between Cognitive walkthroughs and Pluralisticwalkthroughs:**

**Cognitive walkthroughs**

* Focus on ease of learning.
* Designer presents an aspect of the design & usage scenarios.
* Expert is told the assumptions about user population, context of use, task details.
* One or more experts walk through the design prototype with the scenario.
* Experts are guided by 3 questions.

**Pluralistic walkthrough**

* Variation on the cognitive walkthrough theme.
* Performed by a carefully managed team.
* The panel of experts begins by working separately.
* Then there is managed discussion that leads to agreed decisions.
* The approach lends itself well to participatory design.
* Also other adaptations of basic cognitive walkthroughs.

**What is Evaluation using analytics? And Give Examples:**

* A method for evaluating user traffic through a system or part of a system.
* Many examples: Google Analytics (chapter 7), Visistat, Learning Analytics, Times of day & visitor IP addresses , social network analysis

**What is Predictive models? And what it’s advantages ?**

* Provide a way of evaluating products or designs without directly involving users.
* Less expensive than user testing.
* Usefulness limited to systems with predictable tasks - e.g., telephone answering systems, mobiles, cell and smart phones.
* Based on expert error-free behavior.

**How FittsLat is useful for evaluating systems and Give Examples?**

* Fitts’ Law is useful for evaluating systems for which the time to locate an object is important, e.g., a cell and smart phones,a handheld and mobile devices.

**Multiple Choices**

**1. A user-centered approach is characterized by ALL these elements EXCEPT for which one of the following?**

a. Considers users’ tasks and goals from inception through development

b. Uses a linear lifecycle model to clearly delineate tasks

c. Is based on empirical measurements of user performance

d. Is developed via an iterative design process

**2. Which of the following best describes what a conceptual model is used for?**

a. Outlines the possible applications and prerequisite concepts for a product

b. Provides a diagram or prototype that embodies the design concept

c. Describes an abstraction or metaphor of the user interface

d. Defines the mappings between concepts and affinity diagrams

**3. Which of the following is NOT a lifecycle model of software development?**

a. Waterfall b. Spiral c. Star d. Cluster

**4. A central problem with the waterfall model is that:**

a. It does NOT allow for iterative design with user feedback

b. It does NOT allow for changes in requirements that ensue during development

c. It does NOT consider software designers’ work practices

d. A and b only

e. All of the above

**5. Which of the following is NOT true of the usability engineering lifecycle model?**

a. In this model, usability goals are integrated into all phases of design

b. Both qualitative and quantitative goals are considered during design

c. Requirements analysis is one of the two major phases of the model

d. The practices that correspond to this model are very cost effective

e. All of the above

**6. Which of the following is NOT a primary reason for doing requirements analysis?**

a. To translate prototypes into requirements for subsequent development

b. To ensure the clarity and specificity of communication about needs

c. To attempt to avoid future usability problems and user frustration

d. To reduce the time and costs involved in developing a system

e. To evaluate the functions of a system during testing

**7. When software is poorly designed, the penalties are:**

a. More time to learn how things work

b. More time to get things done

c. More errors in getting things done

d. Potential users will buy your competitor’s product

e. All of the above

**8. The most important factor leading to the development of usable software is:**

a. An understanding of user needs

b. The right development team

c. In-house design standards

d. Early usability testing

e. Management buy-in

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D. Waterfall strategy is optimal for user experience

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8. Which of the following is/are a step in the waterfall strategy?

1. Requirements specification
2. Prototyping
3. Integration and Testing
4. Coding