Hci

Question 1

1. Many software development projects have adopted the user centered design methodology, characterize the methodology (4 marks)
   - Know your user
   - Actively involve users early and continuously
   - Rapid and frequent iteration of designs with usability assessments
   - Multidisciplinary team
2. SearchIT Ltd Report (9 marks)
   - Dependent variable:
   - Independent variable:
   - Hypothesis:
   - Null hypothesis
3. Argue for sound as an interaction medium when designing user interface (4 marks)
   - Play shoun not just play music, but ask u whether u want to play with headphones or loudspeaker.
   - Sound can also be a very powerful and useful resource as a feedback mechanism
   - Booting computer
   - Sound from a received sms or phone call
   - Sound can be annoying
   - Sound when parking a car
   - Moving into a world of less or no UI, it's important for experience designers to consider designing with audio.
   - There is great potential for sound in designing for wearables and for the Internet of Things.
   - What kind of sound should we choose and how should we present it.
   - Different types of sounds evoke different emotional responses and can be symbolically mapped to shared meanings that are easily identified. Named Earcons, they're just like visual icons that are attributed meaning through time and exposure.
   - Designing with audio allows for greater personalisation of a product. Not only does it give the product a human touch, it can convey a brand's personality in ways that visual cues are not able to.
4. Describe the following concepts as used in user modelling. (3 marks)
   - Domain model:
   - Interaction model:
   - Adaption:
5. Characterized direct manipulation (5 marks)
6. In what situations would you opt for lab-based evaluations? (4 marks)
7. One aim of prototyping (1 mark)

Question 2

1. Through the use of diagram or illustrations, describe the process of user centred design methodology based on the corresponding ISO standard. (12 marks)
    - ISO 13407 standard, user-centered design activities.
    - Understand and specify the context of use.
    - Specify the user and organizational requirements.
    - Produce designs and prototypes.
    - Carry out assessments/evaluations.
    - Need for UCD.
    - Context of use.
    - Requirements.
    - Design solutions.
    - Evaluate design.
    - System satisfies specified requirements.

2. Highlights 3 main types of signs for designing for navigation (3 marks)

3. Keynote speech on The Role of Usability - advantages of usability. (5 marks)
    - Reduced development time and costs;
    - Reduced support costs;
    - Reduced user errors;
    - Reduced training time and costs;
    - Return on Investment.
    - Effectiveness, Efficiency, Satisfaction.

Question 3

1. ICT consultant Inc, "User interface Design" - keynote speech on menu design.
    - Menu is an interaction feature that presents a choice of operations or services

a) What would you include in your keynote speech as the guidelines on menu design. (5 marks)
    - Deciding which items to include
    - How to group those items

b) General challenge in designing menus and the type of menus that exist. (12 marks)
    - A menu label in pull-down menus should reflect the functions of the underlying menu items.
    - The items in pull-down menus should be grouped by function
    - Menu groupings in pull-down menus should be consistent (to facilitate the transfer of learning and confidence to the user)
    - Menu items should be ordered in the menu according to some measure of importance (eg frequency of use)
    - Opposite functionalities (e.g., 'save' and 'delete') should be kept apart to prevent accidental selection of the wrong function

i) Pull-down menus - they are dragged from the main menu by moving the pointer into the menu bar and pressing the button.
ii) Fall-down menus - they automatically appear from the main menu when the pointer enters the menu bar, without having to press the button.
iii) Pop-up menus - they appear when a particular region of the screen, may be designated by an icon, is selected, but they only stay as long as the mouse/button is depressed.
iv) Pin-up menus - they can be 'pinned'/attached to the screen, staying in place until explicitly asked to go away
v) Pie menus - the menu options have a circular arrangement with the pointer at the center

2. What are the aims of evaluation? (3 marks)

Question 4
1. WeBest Inc. - cognitive walkthrough evaluation.
   - Who should be the participant of this evaluation? (1 mark)
   - What is required when conducting this type of evaluation? (4 marks)
   - During the evaluations, what questions should the participant ask themselves for each action? (4 marks)
2. Highlights the main guidelines for multimodal user interface design. (6 marks)

3. Once you have collected the experiment data in 1 above, what could you do to it before performing statistical analysis of the same? (2 marks)
   - Data cleaning means finding and eliminating errors in the data.
   - Creating New Variables: Once the data are free of errors, you need set up the variables that will directly answer your research questions.
   - Formatting the Variables:Both original and newly created variables need to be formatted correctly for two reasons:First, so your software works with them correctly. Failing to format a missing value code or a dummy variable
   - Transformation
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4. What are the guidelines for drawing the user's attention to the user interface? (3 marks)
   - Use of different colors
   - Use of scrolling content - use of marquee tags or JQuery
   - Blinking text
   - Use of images
   - Use of big fonts