#### i. Trackball:

#### Advantages:

- 1. Direct hand-to-pointer movement.
- 2. Doesn't block the screen view.
- 3. No extra desk space needed (if on the keyboard).
- Disadvantages:
  - 1. Movement is indirect, not on the same plane as the screen.
  - 2. Lacks direct hand-to-pointer distance relationship.
  - 3. Requires some eye-hand coordination.
  - 4. Hand needs to leave the keyboard.
- Doesn't block the screen view.
- No extra desk space needed (if on the keyboard).

### ii. Joystick:

- Advantages:
  - 1. Direct hand-to-pointer direction.
  - 2. Doesn't block the screen view.
  - 3. No extra desk space needed (if on the keyboard).
- Disadvantages:
  - 1. Movement is indirect, not on the same plane as the screen.
  - 2. Lacks direct hand-to-pointer speed and distance relationship.
  - 3. Requires eye-hand coordination.
  - 4. Can be slow and inaccurate.
  - 5. Requires different hand movements.

6. Hand needs to leave the keyboard.

### iii. Graphic Tablet:

- Advantages:
  - 1. Direct touch-to-pointer relationship in direction, distance, and speed.
  - 2. Comfortable horizontal operating plane.
  - 3. Doesn't block the screen view.
- Disadvantages:
  - 1. Movement is indirect, not on the same plane as the screen.
  - 2. Requires hand to leave the keyboard.
  - 3. Requires additional desk space.
  - 4. Finger may be too large for accuracy with small objects.

#### iv. Touch Screen:

- Advantages:
  - 1. Direct hand-to-pointer relationship in direction, distance, and speed.
  - 2. Movement is on the same plane as the screen.
  - 3. No extra desk space needed.
  - 4. Suitable for high-use environments.
- Disadvantages:
  - 1. Finger may block part of the screen.
  - 2. Finger may lack accuracy for small objects.
  - 3. Hand needs to move far from the keyboard.
  - 4. Fatiguing for extended use.
  - 5. May soil or damage the screen.

### Related posts:

- 1. What do you mean by user interface? Define user interface design. Why user interface is important?
- 2. Describe the importance of good design.
- 3. What are the benefits of good design?
- 4. Write a short note on history of screen design.
- 5. What do you mean by graphical user interface?
- 6. What is popularity of graphics?
- 7. Describe the concept of direct manipulation
- 8. What is graphical system? Write down its advantages and disadvantages.
- 9. Describe the characteristics of graphical system.
- 10. Describe the characteristics of intranet versus the internet.
- 11. What are the usability problems in graphical system?
- 12. Explain web user interface.
- 13. Discuss the popularity of web interface.
- 14. What are the characteristics of web user interface?
- 15. Describe the principles of user interface.
- 16. Describe the principles established the foundation for graphical interfaces.
- 17. Describe the design goals in creating user interface.
- 18. Why web user interface design difficult?
- 19. Explain the five commandments for designing user interface
- 20. Discuss human computer interaction.
- 21. How a person interact with computer.
- 22. What are the factors that make system difficult to use?
- 23. What are the psychological responses to poor design?
- 24. What are the physical reactions to poor design?

- 25. Explain the important human characteristics.
- 26. Describe the following term with respect to humancharacteristics in design :
- 27. Describe human consideration in design.
- 28. What are the characteristics of mandatory use in user's task for design?
- 29. Give the characteristics of discretionary user
- 30. Explain human interaction speed.
- 31. What are the methods for gaining an understanding of users?
- 32. Discuss business and requirement analysis.
- 33. Designing a website, what kinds of interview questions are appropriate for asking users?
- 34. Explain focus group. What are steps in setting up a focus group?
- 35. Explain card sorting for websites.
- 36. Describe the steps for creating electronic survey.
- 37. Determine the basic business functions.
- 38. What is screen design? Define a well designed screen.
- 39. Describe the goals in screen design.
- 40. What is meant by screen and define it purpose.
- 41. How we can organize screen elements clearly and meaningfully?
- 42. Describe ordering of screen data and content.
- 43. What do you mean screen navigation and flow?
- 44. What do you understand by visually pleasing composition?
- 45. Discuss the perceptual principles that can be used toaid screen functional groupings.
- 46. How to group screen elements using border?
- 47. Discuss amount of information.
- 48. Discuss the following:
- 49. How to minimize the problems in scrolling?
- 50. Discuss about the term 'Distinctiveness'.

- 51. Discuss the techniques to provide emphasis.
- 52. How to convey depth of levels or a three-dimensional appearance?
- 53. How information is presented simply and meaningfully?
- 54. Discuss about typography.
- 55. Discuss about information entry and modification screens.
- 56. What are the types of statistical graphics?
- 57. Discuss intranet and extranet design guidelines.
- 58. Write short note on statistical graphics
- 59. Explain the components of statistical graphics.
- 60. Discuss technical consideration in interface design for : i. Graphical system ii. Web system iii. Other web consideration
- 61. Discuss windows and its characteristics.
- 62. What are the components of window?
- 63. Describe the window presentation style.
- 64. What are the advantages of tiled window and overlapping window?
- 65. What are the different types of windows?
- 66. Explain different window management schemes.
- 67. Describe the structure of menus.
- 68. Discuss the functions of menus.
- 69. What are website navigation problems?
- 70. What are the various task performed by device-based controls.
- 71. Discuss various device based controls.
- 72. Discuss the guidelines for selecting proper device-based controls.
- 73. What are selection controls?
- 74. Describe the various operable controls.
- 75. What is text? How we present and write text?
- 76. Discuss text for web pages.

- 77. Write a short note on message.
- 78. What are the message box guidelines recommended by Microsoft?
- 79. Discuss message box controls.
- 80. Discuss instructional message in detail.
- 81. What is icon? Write down the characteristics of icons.
- 82. Explain design process for icons.
- 83. Describe icon animation and audition.
- 84. Describe multimedia in detail.
- 85. What is color?
- 86. What are the uses of color?
- 87. What are the problems related to color?
- 88. How to choose color?
- 89. What is software tool? What are the commonly usedtools in human computer interface?
- 90. Explain specification method.
- 91. Describe interface building tools in detail.
- 92. What are the features of interface building tools?
- 93. Explain interaction devices.
- 94. Describe keyboard and function keys.
- 95. Describe pointing devices and types of interaction tasks useful for pointing devices.
- 96. What are the types of pointing devices?
- 97. Explain speech recognitions.
- 98. Discuss speech digitization and generation.
- 99. Describe image and video displays.
- 100. What are the characteristics of video display devices?
- 101. Write a short note on drivers.