Challenges with Natural Language:

- Designers often start by expressing specifications in their natural language, like English.
- However, natural-language specifications are often lengthy, vague, and ambiguous, making them difficult to prove correct, consistent, or complete.

Formal and Semi-Formal Languages:

- To overcome these challenges, formal and semi-formal languages are employed.
- These languages have a defined grammar and procedures to determine if a string adheres to the language.

Various Specification Methods:

- Grammars:
    - Used to specify textual commands or expressions that a program should understand.
    - For example, Backus-Naur form (BNF) is often used in computer programming languages.
- Menu-Selection and Dialog-Box Trees:
    - Involves constructing trees that guide designers and users in making selections.
    - Online tools and simple drawing tools help visualize the entire tree.
- Transition Diagram:
    - Uses nodes to represent system states and links between nodes to depict possible transitions.
    - Each link is labeled with the user action and possible computer responses.
- Statecharts:

- Statecharts are diagrams with nested roundtangles that group related actions and transitions.
- They are useful for specifying interfaces, offering features like concurrency and external interrupt events.

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 ofusers ?
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. What are the advantages and disadvantages of :i. Trackball ii. Joystickiii. Graphic tablet iv. Touch screen
73. Discuss the guidelines for selecting proper device-based controls.
74. What are selection controls ?
75. Describe the various operable controls.
76. What is text ? How we present and write text ?
77. Discuss text for web pages.
78. Write a short note on message.
79. What are the message box guidelines recommended by Microsoft ?
80. Discuss message box controls.
81. Discuss instructional message in detail.
82. What is icon ? Write down the characteristics of icons.
83. Explain design process for icons.
84. Describe icon animation and audition.
85. Describe multimedia in detail.
86. What is color ?
87. What are the uses of color ?
88. What are the problems related to color ?
89. How to choose color ?
90. What is software tool ? What are the commonly usedtools in human computer interface ?
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.