**Foundation Certificate in Information Technology**

**System Analysis & Design**

**Semester 02 – 2022**

**Tutorial 05 – Software Development Methodologies**

**Question 01: Select the suitable answer**

1. Which of these is not one of the constraints of a project?
2. Scope
3. Resources
4. Team
5. Budget
6. Sometimes called the ………………, the linear sequential model suggests a systematic, sequential approach to software development that begins at the system level and progresses through analysis, design, coding, testing, and support.
7. Classic life cycle
8. The waterfall model
9. Incremental
10. Both (a) & (b)
11. The waterfall model of software development is
12. A reasonable approach when requirements are well defined.
13. A good approach when a working program is required quickly.
14. The best approach to use for projects with large development teams.
15. An old-fashioned model that is rarely used any more.
16. Waterfall model is not suitable for?
17. Small Projects
18. Complex Projects
19. Accommodating change
20. (b) and (c) Only
21. None of Above
22. Which of the following is **not true** regarding the waterfall method?
23. Fairly rigid approach
24. Can easily go back to previous phases
25. Good for traditional type of projects
26. Not as good for many of the new types of interactive and highly complex applications
27. This approach is less used now
28. The ……………… model stipulates that the requirements be completely specified before the rest of the development can processed.
29. Waterfall
30. Rapid Application Development (RAD)
31. Iterative Development
32. Incremental Development
33. Which model is also called as the classic life cycle or the Waterfall model?
34. Iterative Development
35. Linear Sequential Development
36. RAD Model
37. Incremental Development
38. Which statement is not explained waterfall model?
39. Very well understood the requirements for smaller projects.
40. Phases are processed and completed one at a time.
41. Functional additional capability to enhance the product performance at any phase.
42. Management is easy resultant model have rigidity functionality. Each phase has specific region of working, deliverables and review process.
43. Which one of the following models is not suitable for accommodating any change?
44. Build & Fix Model
45. Prototyping Model
46. RAD Model
47. Waterfall Model
48. The first phase of waterfall model is
49. Requirement Gathering and analysis
50. System design
51. Implementation
52. Testing
53. In which model of SDLC phases are dependent on the previous phase output
54. Agile SDLC model
55. Big Bang SDLC model
56. Prototype model
57. Waterfall model
58. Which phase of waterfall model take maximum time?
59. Design phase
60. Requirement gathering and analysis phase
61. Development phase
62. Testing phase
63. In which phase of the software design and development project would you build a blueprint of the proposed system?
64. Analysis phase
65. Design phase
66. Requirements phase
67. Development phase
68. Which of the following strategies are adopted if information requirements are not well-defined?
69. Rapid application development method
70. Structured analysis development method
71. Systems development life cycle method
72. Prototyping method
73. Spiral method
74. What are prototypes?
75. Prototypes is a working model of part or all a final product
76. Prototypes does not represent any sort of models
77. Prototype can never consist of full size
78. All the mentioned.
79. Customers will not have trouble using a proposed system. Select the best it for answer:
80. Waterfall
81. Spiral
82. Prototype
83. None of these
84. What is prototype?
85. Mini-model of existing system
86. Mini-model of proposed system
87. Working model of existing system.
88. None of the above
89. A software life cycle model which builds a throwaway version
90. Prototyping Model
91. Linear Sequential Model
92. Both answers are correct
93. None of the above
94. Prototyping aims at
95. End-user understanding and approval**.**
96. Program logic
97. Planning of dataflow organization
98. None of the above.
99. Which of the following is/are the shortcomings of prototyping development model?
100. Leading users to overestimate the capabilities of a software product.
101. Difficulties in project management and control.
102. provide a tangible or visual expression of proposed system.
103. Difficulty in applying the technique to large systems design.
104. A, B and C only
105. B, C and D only
106. A, B and D only
107. All the above
108. The ……………………. usually involves building a small version of the intended system prior to building a small version of the intended system prior to building the proposed completed system.
109. waterfall approach
110. prototyping approach
111. spiral approach
112. incremental approach

**Question 02: Structured Questions**

1. Brands outlet is an upcoming clothing store located in Colombo. The owner of the company is planning to launch a website to promote the clothing items and reach to many customers. She has hired you to design and develop this website. During the discussion you had with the owner you identified that the owner is very clear about the requirements (what she needs form this system) of the system. You are also well experience in developing web sites. since this is a simple website, this is a simple project as well. Moreover, the owner has informed you that the completion time is not a big issue as long as the website is ready within a year.

According to the description given above which software development methodology would you select to develop the website? Give reasons to your answer.

1. What is a software development methodology?
2. What is a Project?
3. State the Characteristics of the project and briefly explain them.
4. What are the constraints need to be considered when you are doing the project?
5. What is Waterfall Development Methodology? State the situations can apply the Waterfall Development Methodology.
6. How the prototyping is essential for the software development process?
7. Show the stages of Prototyping technique with aid of diagram.
8. State the situations can apply the Prototyping technique for software development.
9. What are the approaches to Prototyping?
10. Differentiate Evolutionary prototyping and Throw-away prototyping