Q.1 For a well understood data processing application it is best to use

* + (A) The waterfall model (B) prototyping model
  + (C) the incremental model (D) the spiral model

Q.2 If every requirement stated in the Software Requirement Specification (SRS) has only one interpretation, SRS is said to be

* + (A) correct. (B) unambiguous.
  + (C) consistent. (D) verifiable.

Q.3 In the spiral model ‘risk analysis’ is performed :

* + (A) In the first loop (B) in the first and second loop
  + (C) In every loop (D) before using spiral model

Q.4 Modifying the software to match changes in the ever changing environment is called

* + (A) adaptive maintenance (B) corrective maintenance
  + (C) perfective maintenance (D) preventive maintenance

Q.5 Changes made to the system to reduce the future system failure chances is called

* + (A) Preventive Maintenance (B) Adaptive Maintenance
  + (C) Corrective Maintenance (D) Perfective Maintenance

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| 1. Which of the following is NOT a phase in the software engineering process? |
| a) Requirements Engineering |
| b) Design |
| c) Implementation |
| d) Marketing |
| Answer: d) Marketing |
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| 2. What is the primary purpose of requirements elicitation? |
| a) To design the system |
| b) To identify and gather user needs |
| c) To implement the software |
| d) To test the system |
| Answer: b) To identify and gather user needs |
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| 3. Which model represents a linear approach to software development? |
| a) Spiral Model |
| b) Waterfall Model |
| c) Agile Model |
| d) Incremental Model |
| Answer: b) Waterfall Model |
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| 4. Who are the primary stakeholders in requirements elicitation? |
| a) Developers only |
| b) Testers only |
| c) Customers and end-users |
| d) System administrators only |
| Answer: c) Customers and end-users |
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| 5. Which of the following techniques is NOT used in requirements elicitation? |
| a) Interviews |
| b) Brainstorming |
| c) Debugging |
| d) Questionnaires |
| Answer: c) Debugging |
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| 6. In the Spiral Model, what is the primary focus of each iteration? |
| a) Risk analysis and refinement |
| b) Writing code |
| c) Deployment |
| d) Testing |
| Answer: a) Risk analysis and refinement |
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| 7. What is the main difference between functional and non-functional requirements? |
| a) Functional requirements describe the system's operations, while non-functional requirements describe system quality attributes. |
| b) Non-functional requirements are optional, while functional requirements are mandatory. |
| c) Functional requirements are user-based, while non-functional requirements are system-based. |
| d) None of the above. |
| Answer: a) Functional requirements describe the system's operations, while non-functional requirements describe system quality attributes. |
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| 8. Which of the following is a popular tool for modeling requirements? |
| a) Unified Modeling Language (UML) |
| b) MS Word |
| c) Python |
| d) GitHub |
| Answer: a) Unified Modeling Language (UML) |
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| 9. What is the primary output of the requirements elicitation process? |
| a) Software code |
| b) Software requirement specification (SRS) document |
| c) Design document |
| d) Test cases |
| Answer: b) Software requirement specification (SRS) document |
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| 10. Which of these is a challenge in the requirements elicitation process? |
| a) Understanding user needs clearly |
| b) Writing code in Java |
| c) Choosing the right database |
| d) Performing regression testing |
| Answer: a) Understanding user needs clearly |
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| 11. In Agile processes, how are requirements typically gathered? |
| a) Through a fixed document at the start |
| b) Through ongoing collaboration and user stories |
| c) Through Gantt charts |
| d) Through risk assessment |
| Answer: b) Through ongoing collaboration and user stories |
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| 12. Which elicitation technique involves a structured group discussion to generate ideas? |
| a) Observation |
| b) Interview |
| c) Brainstorming |
| d) Prototype building |
| Answer: c) Brainstorming |
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| 13. What is the purpose of a feasibility study in the engineering process? |
| a) To test the final software |
| b) To determine if the proposed solution is viable |
| c) To write the software requirements specification |
| d) To create user documentation |
| Answer: b) To determine if the proposed solution is viable |
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| 14. Which of the following is true about prototyping in requirements elicitation? |
| a) It is used only for functional requirements. |
| b) It helps in visualizing unclear requirements. |
| c) It is a replacement for final implementation. |
| d) It eliminates the need for user feedback. |
| Answer: b) It helps in visualizing unclear requirements. |
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| 15. Which stakeholder is most likely to specify non-functional requirements like security and performance? |
| a) End users |
| b) System architects |
| c) Testers |
| d) Sales team |
| Answer: b) System architects |
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| (5 Scenario-Based Questions) |
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| 16. Scenario: A client requests a system to handle online transactions. During elicitation, they only provide vague requirements like "It should be fast" and "It must be secure." Which approach should you use? |
| a) Skip to implementation based on assumptions |
| b) Conduct brainstorming sessions and prototype development |
| c) Develop the entire system and present it |
| d) Write user stories without consulting stakeholders |
| Answer: b) Conduct brainstorming sessions and prototype development |
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| 17. Scenario: During an interview with stakeholders, two stakeholders provide conflicting requirements about a feature's functionality. How should you handle the situation? |
| a) Choose the requirement from the senior stakeholder |
| b) Document both requirements and escalate to project management |
| c) Ignore one of the requirements |
| d) Implement both requirements without clarification |
| Answer: b) Document both requirements and escalate to project management |
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| 18. Scenario: A user states that a critical feature is missing after the requirements have been finalized. How can you avoid such issues in the future? |
| a) Use more robust elicitation techniques like prototypes or joint application design sessions. |
| b) Ignore the missing feature and proceed with development. |
| c) Revisit the finalized requirements document and stop consulting users. |
| d) Rely only on interviews for future projects. |
| Answer: a) Use more robust elicitation techniques like prototypes or joint application design sessions. |
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| 19. Scenario: A development team realizes late in the project that a requirement was misinterpreted due to vague wording. What could have prevented this? |
| a) Conducting formal requirement reviews and validations early. |
| b) Skipping requirements elicitation and starting design. |
| c) Assuming all stakeholders understand the technical terminology. |
| d) Using only emails to gather requirements. |
| Answer: a) Conducting formal requirement reviews and validations early. |
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| 20. Scenario: The client needs a customizable dashboard for their web application, but they are unsure of specific widgets. How should you proceed? |
| a) Deliver a fixed dashboard with generic widgets. |
| b) Create a prototype of the dashboard and iterate based on client feedback. |
| c) Finalize the dashboard design without client input. |
| d) Skip the dashboard feature for now. |
| Answer: b) Create a prototype of the dashboard and iterate based on client feedback. |