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Total No. of Pages : 02

Total No. of Questions : 09

B.Tech. (Computer Science & Engg.) (Sem.-7)

AGILE SOFTWARE DEVELOPMENT

Subject Code : BTCS-710-18

M.Code : 90501

Date of Examination : 13-12-2023

Time : 3 Hrs.

Max. Marks : 60

INSTRUCTIONS TO CANDIDATES :

1. SECTION-A is COMPULSORY consisting of TEN questions carrying TWO marks each.
2. SECTION-B contains FIVE questions carrying FIVE marks each and students have to attempt any FOUR questions.
3. SECTION-C contains THREE questions carrying TEN marks each and students have to attempt any TWO questions.

SECTION-A

1. Write briefly :

- a) What is regression testing?
- b) Describe the role of XP.
- c) Write the benefits of agile in software development.
- d) Analyze the difference between scrum and kanban.
- e) Describe TDD.
- f) Define error in testing with example.
- g) How to maintain a software in agile development?
- h) What are the activities of a code refactoring?
- i) Define the test suite.
- j) Explain values in agile methodology.

SECTION-B

2. Identify the problems one would face, if he tries to develop a large software product without using agile principles.
3. A team at ZXXM is executing a project for a customer, using agile software development approach, for every activity, they take a sign-off from the customer as per the clause

present in the contract. The requirements are also being developed as per what was agreed upon in the contract during the start of the project with minimal interactions with the customer. As per the manifesto for Agile Software Development, which value is being violated here? Explain.

4. What is the difference between verification and validation? Explain the concept of continuous integration.
5. An iteration started with 10 user stories to deliver. In the middle of iteration, a team member got sick and was not available to work. During a daily stand-up meeting, this was raised to the Scrum Master to seek advice as team thinks they cannot deliver all 10 user stories in the iteration. What should be the Scrum Master's advice to team and why?
6. The current size of the Agile team is increasing from 9 to 15. As a result, it is observed that the team is unable to complete their daily stand-up meetings within the stipulated 15 minutes. As a Scrum Master, what options you are most likely to explore and why?

SECTION - C

7. Define all design principles. Identify the **SOLID Principle** which is applied in scenario and explain the reason with the help of diagram. In a video game, there is a main character Tintin. He can disguise himself as a boy or a spy or a scientist and play that role depending on the interrogation being done. Three classes have been created - one each for each of the roles that can be played by Tintin. All these three classes inherit from a base class called TinTin.
8. Define the vision statement for web based examination system and create the features in the form of User stories using INVEST principle. Show three examples of user stories split using SPIDR technique.
9. Various design techniques such as abstraction, decomposition, modularization, cohesion, coupling, encapsulation and completeness are used in developing product using agile methodology. Which of the mentioned principles have been violated in the following scenario :
 - a) Too many global variables in the code after implementing design
 - b) Cyclic dependencies among classes
 - c) All data in all classes is public
 - d) Huge class doing many unrelated operations
 - e) Important information of a module is directly accessible by other modules.

NOTE : Disclosure of Identity by writing Mobile No. or Making of passing request on any page of Answer Sheet will lead to UMC against the Student.