

Duration : 2 Hours

Marks : 60

Instructions: 1) Figures to the right indicate Full Marks.
2) All Questions are compulsory.

- Q.1.A) Define the following in not more than 20-30 words: 5X1=05
- a. Waterfall Model
 - b. Burndown Chart
 - c. Prototype
 - d. Version Control
 - e. Agile Framework

- Q.1.B) Match the Following and Rewrite the Matched Pairs : 5X1=05

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|----------------------|---|
| 1. Verification | A. Ensures that the software application does not crash and remains stable with invalid data inputs |
| 2. Black Box Testing | B. Requirements are checked if implemented correctly |
| 3. Waterfall Model | A. Ensures that the software application does not crash and remains stable with valid data inputs |
| 4. Negative Testing | D. Classic Lifecycle Model. |
| 5. Positive Testing | E. Mechanism to check if ,for a given input, the output is correct. |

Q.2. Answer the following:

- a) Mention two characteristics of a good software. 02
- b) Describe the Spiral model and specify one of its advantages. 03
- c) Explain five types of environments in Build and Release Infrastructure 05

Q.3. Answer the following:

- a) What is a sprint? 02
- b) Write two user stories for an Online Shopping Application. 03
- c) Illustrate in detail, the Life Cycle of Scrum Framework. 05

Q.4. Answer the following:

- a) What is a Daily Standup meeting in Scrum? 02
- b) Explain the three pairs in Pair Programming. 03
- c) Illustrate the role played by each type user , who is involved in software development using Scrum. 05

Q.5. Answer the following:

- a) State the purpose of code refactoring. 02
- b) Discuss the importance of Pair Programming. 03
- c) Determine the User Story Points for each of the below User Story and justify the same.: 05

(Reference : 1 means Least effort , 3 means medium effort and 5 means most effort required. The below User Stories are for Mobile app for product maintenance.(Product could be an electronic gadget)

(a) As a user, I want to upload an image of an error encountered to find a solution more quickly.

(b) As a user I want to be able to edit my product's working details so that I can maintain the history of usage statistics.

(c) As a user I want to receive notifications and reminders for my product servicing so that I can use the product more efficiently.

Q.6. Answer the following:

- a) List any two levels of testing. 02
- b) Specify two advantages of performing black box testing. 03
- c) Explain the following about the Agile Manifesto : 05
 - 'Customer Collaboration Over Contract Negotiation'
 - 'Responding to Change over Following a Plan'