

26/11/18

(5)

(2½ hours)

[Total Marks: 75]

N. B.: (1) All questions are compulsory.(2) Make suitable assumptions wherever necessary and state the assumptions made.(3) Answers to the same question must be written together.(4) Numbers to the right indicate marks.(5) Draw neat labeled diagrams wherever necessary.(6) Use of Non-programmable calculators is allowed.1. Attempt any two of the following: 10

- What is quality? Explain quality viewpoints and expectations in producing and buying software.
- State the phases of fundamental test process. Describe test closure activity of the test process.
- Write note on Psychology of Testing.
- What is the difference between software fault and failure? What are the causes of software failure?

2. Attempt any two of the following: 10

- What is incremental development model? Briefly explain the characteristics of Rapid Application Development.
- What is maintenance testing? Explain the different reasons for maintenance testing.
- What is integration testing? Explain any two integration strategies with its advantages and disadvantages.
- Explain the two specific types of tests related to software changes.

3. Attempt any two of the following: 10

- Explain the different aspects of code structure to be considered during static analysis?
- Briefly explain the planning and kick-off meeting phases of formal review.
- Explain the goals and characteristics of inspection.
- What is static testing? List the objectives and advantages of static testing on software work products.

4. Attempt any two of the following: 10

- Explain cause-effect table testing with the help of an example.
- Write short note on test case specification and test procedure specification.
- Explain boundary value analysis with the help of an example.
- What is decision coverage? With the help of an example show that 100% decision coverage guarantees 100% statement coverage, but vice versa is not true.

5. Attempt any two of the following: 10

- What is configuration management? How configuration management supports testing?
- Explain the typical factors that influence the effort related to testing.
- What is the purpose and importance of test plan in software testing? Summarize the content of test plan according to 'Standard for Software Test Documentation'.
- What is risk? Explain the different classifications of risk in software testing.

6. Attempt any two of the following:

- a. Explain the characteristics of test management tools.
- b. Explain the different levels of scripting used in test execution tools.
- c. List the benefits and risks of test automation and tool support for testing.
- d. Define the following terms  
i)Stub ii)Driver iii)Static analyzer iv)Debugging v)Coverage tool

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7. Attempt any three of the following:

- a. State the principles of software testing. Explain any two in detail.
- b. Define the following characteristics of software  
i)Reliability ii)Interoperability iii)Portability iv)Usability v)Maintainability
- c. What is cyclomatic complexity? With the help of an example, explain two ways to calculate cyclomatic complexity.
- d. Briefly explain the different factors that influence the selection of appropriate test design technique.
- e. List the major types of test approaches. Explain any two in detail.
- f. What are the important factors to be considered in selecting a tool? State the objectives for a pilot project for a new tool.

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