TYIT Sem-Ⅴ    Nov-2017

ST

**Q.P. Code :01767**

[Time: $2\frac{1}{2}$ Hours]                                        [ Marks:75]

Please check whether you have got the right question paper.

N.B:    1.  **All** questions are **compulsory**.
        2.  Make **suitable assumptions** wherever necessary and **state the assumptions** made.
        3.  Answer 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**.

**Q.1**   Attempt **any two** of the following:                                        **(10)**
   a.  Define Software Testing. Why is it necessary?
   b.  Explain the software testing principles.
   c.  Compare and contrast the mindset of a tester and that of a developer.
   d.  What is quality? Discuss the correlation between testing and quality.

**Q.2**   Attempt **any two** of the following:                                        **(10)**
   a.  Explain V-model.
   b.  Explain the different test levels.
   c.  Describe the purpose of confirmation testing and regression testing.
   d.  Write a short note on maintenance testing.

**Q.3**   Attempt **any two** of the following:                                        **(10)**
   a.  Explain the difference between static and dynamic techniques.
   b.  Explain the factors for successful performance of reviews.
   c.  Describe the objective of static and list typical benefits of static analysis.
   d.  Describe the importance and value of considering static techniques for the assessment of software work products.

**Q.4**   Attempt **any two** of the following:                                        **(10)**
   a.  Explain the characteristics of specification-based testing, structure-based testing and experience-based testing.
   b.  Explain boundary value analysis with help of an example.
   c.  Write short note on experienced based techniques.
   d.  Define the concept and importance of code coverage.

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**Q.5**    **Attempt <u>any two</u> of the following:**      (10)
a. Discuss the importance of independent testing.
b. Discuss the IEEE 829 standard Test Plan template.
c. Explain briefly the major types of test strategies that are commonly used.
d. Define the following: defect density, failure rate, test control, test coverage, test monitoring.

**Q.6**    **Attempt <u>any two</u> of the following:**      (10)
a. Classify different types of tests according to the process activates.
b. Summarize the potential benefits and risks of test automation and tool support for testing.
c. State the main principles of introducing a tool into an organization.
d. Define the following: debugging tool, driver, probe effect, data-driven testing, keyword-driven testing.

**Q.7**    **Attempt <u>any three</u> of the following:**      (15)
a. Explain briefly the fundamental test process.
b. Define COTS, verification, validation, stub and drivers.
c. Define the following: entry criteria, exit criteria, moderator, reviewer, scribe.
d. List the factors that influence the selection of the appropriate test design technique.
e. Write a short note on test monitoring.
f. State the goals of a proof of concept or piloting phase for tool evaluation.