Question Paper Code : 20728

B.E./B.Tech. DEGREE EXAMINATION, NOVEMBER/DECEMBER 2018.

Sixth/Seventh Semester

Information Technology

IT 6004 — SOFTWARE TESTING

(Common to Computer Science and Engineering)

(Regulations 2013)

(Also common to PTIT 6004 – Software Testing for B.E. (Part-Time)
Sixth Semester – Computer Science and Engineering – Regulations 2014)

Time : Three hours   Maximum : 100 marks

Answer ALL questions.

PART A — (10 × 2 = 20 marks)

1.   Mention the role of process in software quality.

2.   What is meant by Feature Defects?

3.   Compare black box and white box testing.

4.   Define COTS Components.

5.   List the levels of Testing.

6.   What is Regression testing?

7.   Mention the duties of component – wise testing teams.

8.   What is the need of Test Incident Report?

9.   What is the need for Automated Testing?

10.   Define Progress Metrics.

PART B — (5 × 13 = 65 marks)

11. (a) Discuss in detail about Software testing principles. (13)

Or

(b) (i) Write short notes on Origins of defects. (7)

(ii) Describe about Tester Support for Developing a Defect Repository. (6)

12. (a) Explain about the following methods of black box testing with example.

(i) Equivalence class partitioning.

(ii) Boundary value analysis. (13)

Or

(b) Discuss in detail about static testing and structural testing. Also write the difference between these testing concepts. (13)

13. (a) State Unit Test and describe about planning and Designing of Unit Test. (13)

Or

(b) Explain elaborately about the various types of system testing. (13)

14. (a) Explain the concepts of test planning in detail. Also mention the way of defining test plan. (13)

Or

(b) Describe the concepts of building a test group. (13)

15. (a) Write short notes on following. (13)

(i) Classifications of automation testing.

(ii) Scope of an automation.

Or

(b) Discuss in detail about selecting the test tool in test automation. (13)

PART C — (1 × 15 = 15 marks)

16. (a) Case Study : Several kinds of tests for a web application.

Abstract :

A UK based company entrusted us to test this project. It's a web application for government to collect data and calculate them to prioritize all the tasks.

Description :

This client is from Hertfordshire in UK, the project is an application for the government. In fact, it includes two parts: web site for data collection and presentation purpose, in parallel a windows application for administration purpose. Here the task is ensuring the quality of the web application, includes many aspects, such as function correctness, performance acceptance, UI appropriateness, and so on. Moreover, for testing function, we had to use the windows application to edit users, services and other data.

The client only gave us the software requirement specification and the applications tested, there wasn't any test plan, test strategy, test cases, even test termination criterion. On the one hand, we had to spend much time in communicating with client to make clearly about some important points; on the other hand, we had to get familiar with the application via operating it and reading requirements.

Then, how to improve the efficiency of regression test?

Or

(b) Illustrate various components of Test plan with an example. (15)