ALLAMA IQBAL OPEN UNIVERSITY, ISLAMABAD
(Department of Computer Science)

Course: Software Quality and Testing (3483) **Semester: Spring, 2013**
Level: BS (CS) **Total Marks: 100**
  Pass Marks: 40

ASSIGNMENT No. 1

Note: All questions carry equal marks.

Q. 1 (a) What is the concept of bug? Explain the process of debugging?

(b) Discuss the importance of testing for delivering good software product.

Q. 2 (a) Write a note on testing axioms. Elaborate different black box testing techniques.

(b) What is the difference between validation and verification? Explain with the help of example.

Q. 3 (a) Discuss the guidelines for efficient coding. Differentiate between data coverage and code coverage.

(b) Discuss the importance of formal review.

Q. 4 (a) Discuss the procedure of running state testing. Also explain where it is applicable.

(b) What is cyclomatic complexity? Explain with the help of example.

Q. 5 (a) What is configuration test? Is it necessary to identify the hardware standard in different configuration test?

(b) Elaborate the process of purchasing the hardware?

ASSIGNMENT No. 2

Total Marks: 100

Note: All questions carry equal marks.

Q. 1 (a) What is compatibility test? Discuss the standards and guidelines for compatibility test.

(b) Differentiate between backward and forward compatibility.

Q. 2 (a) Data sharing create certain issues regarding compatibility. Discuss!

(b) Discuss the need and importance of reviewing documentation.

Q. 3 (a) How we apply a testing strategy on a website comprising of hyperlinks, graphics, forms and objects? Explain with example.

(b) How can we secure our website from hackers?

Q. 4 (a) Why tracking of test cases is important?

(b) Discuss gray-box testing and usability testing in the light of any software application (select any software application as specified by your instructor).

Q. 5 Search on the Internet and identify at least five testing tools. Compare and contrast their features.

3483 Software Quality & Testing   Credit Hours: 4 (3+1)

Recommended Book:
Software Testing by Ron Patton, 2nd Edition

Course Outlines:

Unit No. 1 Software Testing Fundamentals
Software Testing Background, Realities of Software Testing, Examining the Specifications

Unit No. 2 Software Testing Techniques
Testing the software, Examining the code, Testing the software with x-ray glasses

Unit No. 3 Configuration Testing

Overview, Approaching the task, Obtaining the hardware, Identifying the hardware standards, Configuration testing other standards

Unit No. 4 Compatibility Testing

Overview, Platforms and application versions, Standards and guidelines, Data sharing and compatibility

Unit No. 5 Testing the Documentation

Overview of software documentation, Types of software documentation, Importance & realities of documentation testing

Unit No. 6 Web Site Testing

Web page fundamentals, Black-box TESTING (Test, hyperlinks, graphics, forms, and objects), Gray-box testing, White-box testing, Configuration & compatibility testing, Usability testing, Introducing automation

Unit No.7 Working with Test Documentation

Planning the test effort, Writing and tracking test cases, Reporting the test, Measuring the success

Unit No. 8 Software Quality Assurance

Overview, Testing and quality in the workplace, Test management & organization structure, Capability maturity model, ISO 9000

Unit No. 9 Software Testing Careers

Software tester job, Finding a software testing position, Gaining hands on experience, Formal training opportunities, Internet links & Professional Organization

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