WARNING
1. PLAGIARISM OR HIRING OF GHOST WRITER(S) FOR SOLVING THE ASSIGNMENT(S) WILL DEBAR THE STUDENT FROM AWARD OF DEGREE/CERTIFICATE, IF FOUND AT ANY STAGE.
2. SUBMITTING ASSIGNMENTS BORROWED OR STOLEN FROM OTHER(S) AS ONE’S OWN WILL BE PENALIZED AS DEFINED IN “AIOU PLAGIARISM POLICY”.

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

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

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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