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Class Work: 50

Exam: 100

Total: 150

Duration of Exam: 3 Hrs.

NOTE: For setting up the question paper, question no 1 will be set up from all the four sections which will be compulsory and of short answer type. Two questions will be set from each of the four sections. The students have to attempt first common question, which is compulsory, and one question from each of the four sections. Thus students will have to attempt 5 questions out of 9 questions

Section A

Fundamentals and Testing types: First, second and later cycles of testing. Objectives and limits of testing. Overview of S/W development stages, Planning and Design stages and testing during these stages. Glass box code, Regression and Black box testing, Software errors, Categories of software error.

Reporting and analyzing bugs: Problem reports, Content and Characteristics of Problem Report, analysis and Tactics for analyzing a reproducible bug. Making a bug reproducible

Section B

Problem Tracking System: Objective of Problem Tracking System, tasks of the system, Problem tracking overview, users of the tracking system, mechanics of the database

Test Case Design: Characteristics of a good test, equivalence classes and boundary values, visible state transitions, Race conditions and other time dependencies, load testing. Error guessing, Function equivalence testing, Regression Testing, General issues in configuration testing, printer testing

Section C

Localization and User Manuals testing: Translated text expands, Character sets, Keyboards, Text filters, Loading, saving, importing, and exporting high and low ASCII, Operating system Language, Hot keys, Error message identifiers, Hyphenation rules, Spelling rules, Sorting Rules, Uppercase and Lowercase conversion, Printers, Sizes of paper, CPU's and video, Rodents, Data formats a setup options, Rulers and measurements, Culture-bound Graphics and output, European product compatibility, Memory availability, automated testing, Testing User Manuals, Effective documentation, documentation tester's objective, How testing documentation contributes to software reliability

Section D

Testing Tools and Test Planning: Fundamental tools, Automated acceptance and regression tests, standards, Translucent box testing Overall objective of the test plan: product or tool? Detailed objective, type of test, strategy for developing components of test planning documents, components of test planning documents, documenting test materials

S/W Development tradeoffs and models, Quality-related costs, The development time line, Product design, alpha, Pre-beta, Beta, User Interface freeze, Pre-final, Final integrity testing, Project post-mortems, Legal consequences of defective software, Managing and role of a testing group, independent test agencies

Text Book:

1. Testing Computer Software, by Cem Kaner, Jack Falk, Hung Quoc Nguyen, 1999, Pub: Wiley, (Second Edition).