Printed Pages : 4

CA408

(Following Paper ID and Roll No. to be filled in your Answer Book)

PAPER ID : 214408

Roll No.

MCA

(SEM. IV) THEORY EXAMINATION, 2014-15
SOFTWARE TESTING

Time : **3** Hours]   [Total Marks : **100**

Note: (1)   Attempt all question.

(2)   All question carry equal marks.

1   Attempt **any four** question.   **5x4=20**

(a)   Distinguish between verification and validation.

(b)   Explain different categories of defects.

(c)   State and explain the four components of quality.

(d)   What is testing? Why is it necessary? Explain the different approaches to testing.

(e)   What is requirement traceability matrix? State its advantages and disadvantages.

(f)   What are the best software debugging methods'?

2 Attempt **any four** question. 5x4=20

(a) Explain test planning.

(b) Explain black-box, white-box and gray box testing.

(c) Write a note on static testing.

(d) What is cyclomatic complexity? Explain with example.

(e) Distinguish between the static and dynamic analysis of a program.

(f) Which aspects of a software program are tested during Unit Testing?

3 Attempt **any two** question. 10x2=20

(a) Suppose a developed software has successfully passed all the levels of testing, i.e. unit testing, integration testing and system testing. Can we claim that the software is defect free? Justify your answer.

(b) What do you understand by big-bang integration testing? How is big-bang integration testing performed ? Describe situations where big-bang integration testing is desirable.

(c) What is the functional testing? What are the types of testing required for testing a client/server system?

4 Attempt **any two** question. 10x2=20

(a) What is regression testing? When is regression testing done? Why is regression testing necessary? How is regression testing performed?

(b) Explain in detail about the eleven step testing process.

(c) Explain briefly the following :

(i) Tools for regression testing

(ii) Exploratory testing.

5 Attempt **any two** question. 10x2=20

(a) Explain the framework activities involved in the software development process.

(b) You have designed test cases to provide 100% statement and 100% decision coverage for the following fragment of code. if width>length then biggest_ dimension = width else biggest_dimension = length end_if The following has been added to the bottom of the code fragment above. print "Biggest dimension is" &biggest_dimensionprint "Width:" & width print "Length:" & length How many more test cases are required?

(c) Why selecting a test tool is an important aspect of test automation?

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