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13MCA444

Third Semester MCA Degree Examination, Jun/July 2015 Software Testing and Practices

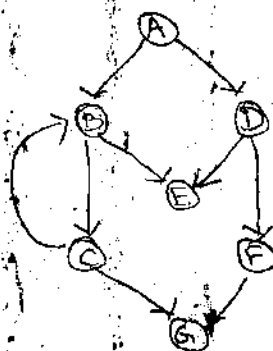
Time: 3 hrs.

Max. Marks: 100

Note: Answer any FIVE full questions.

1. a. Explain the relationship of Human, Errors and Testing with example. (06 Marks)
b. List out quality attributes of a software and explain each of them. (06 Marks)
c. Define the terminologies organizational metrics, project metrics, process metrics and product metrics with example. (08 Marks)
2. a. Define sensitivity, Redundancy and Restriction. (06 Marks)
b. What are Test specifications and cases? Explain Testing Terms. (08 Marks)
c. Define the terms Adequacy criteria and composing criteria. (06 Marks)
3. a. Write the basic definitions of
i) Error ii) Fault iii) Failure iv) Incident. (04 Marks)
b. With the help of diagram, explain Testing Life Cycle. (06 Marks)
c. Narrate the implementation of traditional triangle problem. (05Marks)
d. How to address computation and MIS applications with the help of commission problem. (05Marks)
4. a. Explain BVA test case for two variables functions and Limitations of BVA. (08 Marks)
b. Explain Robustness Testing: (06 Marks)
c. What is ECT? How weak and strong normal ECT are derived. (06 Marks)
5. a. Define DD – paths and construct DD – Paths of the triangle program. (06 Marks)
b. For the given graph, find out the basic path and compute McCabe's Cyclomatic number.

Fig Q.5 (b)



- c. Explain Metric – Based Testing. (05 Marks)
- d. Define slice – Based Testing. (03 Marks)
6. a. Differentiate between traditional view of Testing levels and Alternative Life Cycle models. (04 Marks)

Important Note : 1. On completing your answers, compulsorily draw diagonal cross lines on the remaining blank pages.
2. Any revealing of identification, appeal to evaluator and /or equations written eg. 42+8 = 50, will be treated as malpractice.

- b. Write a note on :
 - i) Waterfall spin - offs.
 - ii) Specification Based life cycle models. (08 Marks)
 - c. What is Integration Testing? Explain Top – Down and Bottom – up Integration. (08 Marks)
- 7
- a. Briefly explain mutation analysis and fault based Testing. (06 Marks)
 - b. Define the terms scaffolding & Test oracles with examples. (08 Marks)
 - c. Explain self – check as oracles and capture replay. (06 Marks)
- 8
- Write short notes on:
- a) SATM.
 - b) Risk planning
 - c) Organizing Documents
 - d) Decision Tables. (20 Marks)
