

**Bachelor in Information Technology (BIT)****Term-End Examination****June, 2007****CSI-08 : QUALITY MANAGEMENT PRINCIPLES***Time : 3 Hours**Maximum Marks : 75*

**Note :** All questions from Section A are **compulsory**. Answer any **three** questions from Section B.

**SECTION A****1.** Define the following :*2×5=10*

- (i) Software Configuration Management
- (ii) Maintenance Error
- (iii) Performance Maintenance
- (iv) Total Quality Management
- (v) Technical feasibility

**2.** Choose the correct answer from the following options :*2×5=10*

- (i) If the number of conditions in a decision table is  $n$ , the maximum number of rules possible is
  - (a)  $n$
  - (b)  $2n$
  - (c)  $2^n$
  - (d)  $\log_2 n$
- (ii) A program  $P$  calls two subprograms  $P_1$  and  $P_2$ .  $P_1$  can fail 50% times and  $P_2$  40% times, then  $P$  can fail
  - (a) 50% times
  - (b) 60% times
  - (c) 10% times
  - (d) 70% times

- (iii) In unit testing of a module, it is found for a set of test data at the maximum 90% of the code alone were tested with the probability of success 0.9. The reliability of module is
- (a) at least greater than 0.9
  - (b) equal to 0.9
  - (c) at most 0.81
  - (d) at least  $1/0.81$
- (iv) Which of the following testing methods is normally used as the acceptance test for a software system ?
- (a) Regression test
  - (b) Integration testing
  - (c) Unit testing
  - (d) Functional testing
- (v) PERT and GANTT charts are used for
- (a) Project planning and control
  - (b) Designing
  - (c) Quality assurance
  - (d) Software testing

3. Do you agree with the statement that an easy and useful way to estimate software efforts and costs is to estimate the lines of codes of software. Justify your answer.

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## SECTION B

Answer any **three** questions from this section.

4. (a) Name the different software production process models. Bring out a comparison of these process models. 8
- (b) Why is it necessary to plan software projects ? What are the broad activities that encompass software project planning ? 7
5. (a) Discuss steps involved in SQA. 5
- (b) Discuss why is it impossible to catch up project completion date by adding more programmes in late stages of software development. 5
- (c) Can use of object oriented techniques in software development improve software economics ? Give justification. 5
6. (a) What is software testing ? What are different kinds of system testing techniques that are performed on large software products ? 8
- (b) Who are important stakeholders in software projects ? Identify them and discuss their roles. 7
7. (a) How is risk analysis done in software projects ? What are the various risk assessment techniques ? 10
- (b) Differentiate between ER diagram and data flow diagram with an example for each. 5

