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Question Paper Code : Z 8441

B.Sc. DEGREE EXAMINATION, NOVEMBER/DECEMBER 2009.

Fifth Semester

Computer Technology

BCS 355 — SOFTWARE ENGINEERING

(Common to B.Sc. Information Technology)

(Regulation 2003)

Time : Three hours

Maximum : 100 marks

Answer ALL questions.

PART A — (10 × 2 = 20 marks)

1. How does one reduce cost due to rework?
2. Which model will you choose for mission tracking system? Justify.
3. What is Functional Point?
4. Define inconsistent SRS.
5. What are the major benefits of reviews?
6. List methods used for quality control.
7. Define error-process.
8. List any two advantage of using Btree.
9. Distinguish between fault and failure.
10. What is the goal of testing?

PART B — (5 × 16 = 80 marks)

11. (a) Suppose you can measure the number of defects detected during the various reviews and testing. However, the customer requires an estimate of the number of defects remaining at delivery time. How will you build a model to predict this? Assume the existence of any data you need?

Or

- (b) If absolutely no metrics are used, can you manage, or even define, a project? What is the bare minimum set of metrics that you must use for a development project?
12. (a) A library database contains entries that have the name of the book, followed by the author's name, the publisher's name and year of publication, the ISBN number of the book, and finally the number of copies of the book. Each of the data entries is on a new line. Represent this databases as a regular expression.

Or

- (b) The basic goal of the requirements activity is to get an SRS that has some desirable properties. What is the role of modeling in developing such an SRS? List three major benefits that modeling provides, along with justifications, for achieving the basic goal.
13. (a) A database system is to be developed. After the requirements, its size is estimated to be 10,000 lines of code. Estimate the overall cost using the Felix model.

Or

- (b) You want to monitor the effort spent on different phases in the project and the time spent on different components. Design a time sheet or form to be filled by the programmers that can be used to get this data. The design should be such that automated processing is possible.
14. (a) Why are formal specifications of modules desirable? What are the limitations of current formal methods and why have they not come into common use?

Or

- (b) Design an experiment to study the relationship between the cyclomatic complexity and size in LOC of modules. Collect a set of programs and then perform the experiment and determine the nature of the relationship between them for these programs.

15. (a) Testing often consumes more resources than any other phase in software development. List the major factors that make testing so expensive.

Or

- (b) If you want to find whether there is a Correlation between complexity and reliability and between size and reliability. What data will you collect during and after termination of a project? Design an experiment to perform this study.