NEW

2015

BCA

4th Semester Examination

SOFTWARE ENGINEERING

PAPER—2204

Full Marks : 100

Time : 3 Hours

The figures in the right-hand margin indicate full marks.

Candidates are required to give their answers in their own words as far as practicable.

Illustrate the answers wherever necessary.

Answer any *five* questions.

1. (a) What is system analysis ? How does it differ from system design ? 2+2

(b) Discuss briefly about five common factors (TELOS) of feasibility study. 5

(c) What is classical waterfall model ? State why this model is difficult to use in project development in recent times. 2+3

2. (a) What is prototype ?

   (b) What are the major advantages of first constructing a working prototype before developing the actual model ?

   (c) What are the major phases in the spiral model of software development ? Explain.

   (d) Write down the difference between logical and physical DFD.

   (e) What is software crisis ? 2+3+5+2+2

3. (a) What do you mean by organic, semi-detached and embedded type projects ?

   (b) Write down the expressions to find out development effort and time in case of organic, semi-detached and embedded type projects according to COCOMO.

   (c) What do you mean by regration testing ?

   (d) Describe the terms test case and test case criterion. 3+3+4+4

4. (a) Explain decision table with an example.

   (b) What are the advantages and disadvantages of decision table ?

   (c) Write down the list of activities that project manager perform during project planning ?

   (d) What do you mean by the software configuration management ? 3+4+3+4

5. (a) What is LOC ? What are the shortcomings of LOC ?

   (b) What is the difference between function point and feature point metric ?

   (c) What is Halstead's software science ?

   (d) What is the difference between validation and verification ? 4+3+3+4

6. (a) What is software reliability ? How can it measure ? Is the measurement of reliability perfect ? Justify your answer. 2+2+2

   (b) Can a program be correct and still not exhibit good quality ? Explain. 3

   (c) Write a short note on ISO 9000 certification. 3

   (d) State the importance of Rayleigh curve on staffing estimation. 2

7. (a) Explain the different types of cohesion that a module might exhibit.

   (b) What is coupling? Is it true that in a good design, the modules should have low coupling? Why?

   (c) Describe the various levels or stages of software testing.

   (d) What is the difference between black-box and white-box testing? 5+3+4+2

[Internal Assessment — 30]

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