2016

MCA

5th Semester Examination

SOFTWARE ENGINEERING

PAPER—MCA-502

Full Marks : 100

Time : 3 Hours

The figures in the 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 do you mean by the expression "life cycle model of software development' ? Why is it important to adhere to a life cycle model during the development of a large software product ? 2+3

(b) Discuss with a schematic diagram, the important activities carried out in spiral model of software development. 2+5

(c) Why spiral model is also known as meta model ? 2

2. (a) Explain stepwise how project size are estimated using function point matric. 8

(b) Explain the two popular empirical techniques for estimation of cost of a product. 6

3. (a) What are the different categories of software development projects according to the COCOMO estimation model. 6

(b) What is Risk Management ? Explain briefly the different activities carried out in Risk Management. 2+6

4. (a) What do you mean by the term 'Software Configuration' and 'Software Configuration Management'.
Why do we need to manage software configuration. 4+5

(b) What is CCB ? Explain the role played by CCB in Software Configuration Management. 2+3

5. (a) As an analyst of a large software development project, discuss the aspects of the software you would include in the SRS ? What would be the organization of your SRS document ? 4+5

(b) List the five desirable characteristics of a good SRS documents. 5

6. (a) Briefly explain the different classes of cohesion and coupling that may occur within a module or between two modules. 8

(b) What problems are likely to arise if two modules have high coupling ? 6

7. (a) Differentiate between (any *two*) : $2\times3\frac{1}{2}$

(i) Function-oriented design approach & object oriented design approach ;

(ii) Black box testing & white box testing ;

(iii) Verification and validation ;

(iv) Top-down decomposition & Bottom-up decomposition.

(b) Write short notes on (any *two*) : $2 \times 3\frac{1}{2}$

(i) System testing ;

(ii) Layered software design ;

(iii) Maintenance ;

(iv) Feasibility study.

[Internal Assessment : 30]
