# 2015

## MCA

## 5th SEMESTER EXAMINATION

## SOFTWARE ENGINEERING

**PAPER—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 is Software Crisis? What factors have contributed to the making of the Software crisis? What are possible solutions to the Software crisis? 2+2+3

(b) Discuss with a Schematic diagram, the important activities carried out in the Evolutionary model of Software development. 2+5

**2.** (a) When does the project planning activity start and end in a software life cycle? List the important activities software project manager perform during project planning. 2+2

(b) What are the different categories of software development projects according to the COCOMO estimation model?

Show how the following are estimated in the Basic COCOMO estimation technique : Cost, Effort and Duration. 6+4

3. (a) What is Risk? Mention the three common types of risk that a typical software project may suffer from? 1+3

(b) What do you mean by 'Software Configuration' and 'Software Configuration Management'?

Briefly discuss how can you manage Software Configuration. 4+6

4. (a) What is SRS? Why is it needed?

Mention the desirable qualities of the SRS documents. Under what circumstances of specification, the SRS is considered as a Bad document. 1+1+3+3

(b) Briefly describe the structure of a SRS document. 6

5. (a) Briefly explain the different activities carried out in Software design phase?

Describe the features of a good design. 2+3

(b) What is Cohesion? Mention the different classes of cohesion that a module may possess. 2+7

**6.** (a) 'A Design is said to be a good one – if it have high cohesion and low coupling.' — Discuss. 5

(b) What do you mean by the term testing? What are the different kinds of Software testing that are usually performed on a large software products? 2+7

**7.** Answer any *two* : 2×7

(a) Draw the control flow graph for the function find largest, which will find the largest number from a set of input numbers. From the control graph determine its cyclometric complexity.

(b) System testing.

(c) Define DFD. Draw a DFD for online University system.

[ ***Internal Assessment*** ] 30