M.Sc. 2nd Semester Examination, 2013

SYSTEM ANALYSIS AND DESIGN/SOFTWARE ENGINEERING

·PAPER—COS - 204

Full Marks : 50

Time : 2 hours

The figures in the right-hand margin indicate marks

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

Illustrate the answers wherever necessary

MODULE – I

(*System Analysis and Design*)

[*Marks* : 25]

Answer any **two** questions

1. (*a*) What is feasibility study ? In preliminary investigation three types of feasibilities are usually studied. Discuss those.   1 + 3

(*b*) What is Data Flow Diagram ? By assuming an "online college admission system" draw a DFD along with context diagram. 2 + 4

2. (*a*) What is fact finding techniques ? Why is it needed ? 2 + 2

(*b*) What do you mean by SRS ? Discuss the basic components of SRS. 2 + 4

3. (*a*) How will you define cost-benefit analysis ? 3 + 1

(*b*) What are the three 'levels' of quality assurance ? Briefly describe them. (3 × 2)

4. Write short notes on (any *four*) : $2\frac{1}{2} \times 4$

(*i*) Balancing DFD

(*ii*) Logical Design and Physical Design

(*iii*) Operational manual

(*iv*) Pilot implementation

(*v*) Design specification.

[*Internal Assessment* : 5 Marks]

(3)

MODULE – II

(Software Engineering)

[*Marks* : 25]

Answer any **two** questions

1. (a) Draw the schematic diagram of a spiral model of software development and also discuss the activities carried out during each phase of the model.

(b) Mention the reasons as to why classical waterfall model can be considered impractical and cannot be used in real projects. 6 + 4

2. (a) What do you mean by the terms "software configuration" and "software configuration management" ? Mention the activities carried out in software configuration management.

(b) What is Risk ? Can several risks be prioritize. If so, how ? (2 + 4) + (1 + 3)

(**4**)

3. (*a*) What do you understand by the term "software testing" ? What are the different types of testing methods that can be used to carry out testing of a large software product ?

   (*b*) What do you mean by "phase containment of errors" ? $(2 + 6) + 2$

4. Write short notes (any *four*) : $2\frac{1}{2} \times 4$

   (*i*) DFD

   (*ii*) Black box testing

   (*iii*) Validation and verification

   (*iv*) Object oriented design

   (*v*) Data dictionary

   (*vi*) ER-diagram.

   [*Internal Assessment* : 5 Marks]