Roll No .....

MCA - 302

M.C.A. III Semester

Examination, December 2014

Software Engineering Methodology

Time : Three Hours

Maximum Marks : 70

Note: i) Answer five questions. In each question part A, B, C is compulsory and D part has internal choice.
ii) All parts of each question are to be attempted at one place.
iii) All questions carry equal marks, out of which part A and B (Max.50 words) carry 2 marks, part C (Max.100 words) carry 3 marks, part D (Max.400 words) carry 7 marks.
iv) Except numericals, Derivation, Design and Drawing etc.

Unit - I

1. a) Define software engineering. List characteristics that reach software different from hardware.
   b) Briefly describe the role of system analyst.
   c) Discuss various information gathering tools.
   d) Explain life cycle model of a software development. Why it is important to adhere to life cycle mode while developing a large software product?

   Or

   Explain the following statements:
   i) Software is developed or engineered; it is not manufactured in the classical sense.
   ii) Software doesn't wear out.

Unit - II

2. a) What is software myths?
   b) Define software product. Mention any two characteristics of software process models.
   c) Explain the role of prototyping in software development.

   d) Explain how incremental model over comes the drawbacks of linear sequential model. For what type of project incremental model is suitable.

   Or

   Explain the spiral model in detail. Why this model is known as meta model?

Unit - III

3. a) Mention the problem faced while developing a software project without software engineering principles.
   b) Verify the statement "The primary characteristics of a good design is low cohesion and high coupling".
   c) What is risk? Discuss.
   d) Differentiate between cohesion and coupling. Mention the different types of coupling and cohesion in modules.

   Or

   Explain in brief various empirical estimation models.

Unit - IV

4. a) Briefly explain the term verification and validation.
   b) Explain defect life cycle.
   c) Differentiate between Object-Oriented Analysis (OOA) and object-oriented design technique.
   d) What is software quality assurance? What are the SQA activities performed during SDLC?

   Or

   Explain unit, Integration and system testing strategies clearly studying their purpose, differences and dependence.

Unit - V

5. a) Discuss applications of MIS in various sector.
   b) What is meant by OO software engineering?
   c) Discuss the impact of software reuse on productivity, quality and cost of the project.
   d) What is software re-engineering? Discuss various activities involved in software re-engineering process.

   Or

   Explain the objective of CASE tools. Discuss any two CASE tools and their purpose.

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