MCA

(SEM. V) ODD SEMESTER THEORY EXAMINATION 2013-14

SOFTWARE ENGINEERING

Time : 3 Hours Total Marks : 100

Note :- Attempt all questions.

1. Attempt any two parts of the following : (10x2=20)

(a) Define the term Software Engineering. Also discuss the generic waterfall model in detail.

(b) Discuss the following in brief:

(i) Software characteristics

(ii) Difference between module and software component.

(c) Explain the spiral life cycle model with its merits and demerits.

2. Attempt any two parts of the following : (10x2=20)

(a) Discuss the significance of requirement engineering. Also write the various steps of requirement engineering with proper explanation.

(b) (i) What is Software Quality ? Write the various attributes of software quality.

(ii) Discuss the merits of SEI-CMM based quality assessment.

(c) Write short notes on :

(i) Data Dictionary

(ii) Data Flow Diagram.

3. Attempt any two parts of the following : (10x2=20)

(a) What do you understand by terms cohesion and coupling in the respect of software design ? Discuss in detail.

(b) Write a note on Halstead's Software Science.

(c) What are the advantages of using an obj ect oriented design over a function oriented design ? Discuss.

4. Attempt any two parts of the following : (10x2=20)

(a) (i) What is Software Testing ? Discuss the objectives of it.

(ii) Write the difference between black-box testing and white-box testing.

(b) What is Coding Standard ? Also discuss the different types of code reviews with examples.

(c) Explain the following:

(i) Unit testing (ii) Acceptance testing

(iii) Regression testing (iv) Alpha and Beta testing.

5. Write short notes on any two: (10x2=20)

(a) Software Configuration Management

(b) Constructive Cost Models (COCOMO)

(c) Software Re-Engineering and Software Reverse Engineering.