

(Following Paper ID and Roll No. to be filled in your Answer Book)

PAPER ID : 0114

Roll No.

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B.Tech.

(SEM IV) EVEN SEMESTER THEORY EXAMINATION,
2009-2010

SOFTWARE ENGINEERING

Time : 3 Hours

Total Marks : 100

- Note :**
- (i) *Attempt ALL questions.*
 - (ii) *All questions carry equal marks.*
 - (iii) *Be precise in your answer.*
 - (iv) *No second Answer book will be provided.*

1. Attempt any four parts of the following : (4x5=20)
- (a) What do you mean by software ? What are the attributes of good software ? Explain.
 - (b) "Software does not wear out" Justify this statement.
 - (c) What are differences between generic software product development and custom software development ? Explain.
 - (d) What do you mean by software quality ? Describe the factors that affect the software quality ?
 - (e) Write short note Waterfall Model describing its advantages and disadvantages.
 - (f) What do you mean by a software process ? What is the difference between methodology and a process ? Explain.

2. Attempt any two parts of the following : (2x10=20)

- (a) (i) What do you mean by the functional and non-functional requirements ? Give any four functional requirements and four non-functional requirements for computer based library information system.
- (ii) Write a short note requirements management.
- (b) (i) Discuss the IEEE standard for SRS.
- (ii) What are various software quality assurance attributes ? Discuss.
- (c) Write short note on the following :
 - (i) Software quality framework
 - (ii) SEI-CMM model.

3. Attempt any two parts of the following : (2x10=20)

- (a) Describe major weaknesses of the Function Oriented Design. Give a complete overview of the Object Oriented Design and UML notations/diagram.
- (b) (i) Write short notes on coupling and cohesion.
- (ii) Discuss bottom-up and top-down design approach with example.
- (c) (i) Describe Function Point based measures to estimate size, development effort and development cost of software product.
- (ii) Write short note for calculating cyclomatic complexity of a program with suitable example.

4. Attempt any two parts of the following : (2x10=20)

- (a) (i) Define drivers and stub modules. Why are drivers and stub modules required ?
- (ii) What is the difference between black-box testing and white-box testing ? Explain.
- (b) Write short note on the following with examples :
 - (i) Integration Testing
 - (ii) Regression Testing
- (c) (i) Distinguish between static and dynamic analysis of a program. How are static and dynamic program analysis results useful ?
- (ii) Write short note on the alpha-beta testing of products.

5. Attempt any two parts of the following : (2x10=20)

- (a) What do you mean by the software configuration management ? Describe various software configuration management activities in detail.
- (b) (i) Describe various activities in risk management.
- (ii) Corrective and perfective maintenance of software.
- (c) Write short note on the following :
 - (i) Basic form of COCOMO model.
 - (ii) Differentiate between software engineering and reverse engineering.

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