

Printed Pages—3

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ECS602

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

PAPER ID : 2475

Roll No.

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B. Tech.

(SEM. VI) THEORY EXAMINATION 2010-11

SOFTWARE ENGINEERING

Time : 3 Hours

Total Marks : 100

Note : (1) Attempt **all** questions.

(2) All questions carry equal marks.

1. Attempt any **two** parts of the following : **(2×10=20)**

(a) Discuss about the software Development Life Cycle ? Why is it important to adhere to life cycle model while developing a large software product ?

(b) (i) Describe the characteristics of a software with examples.

(ii) What do you mean by software engineering process ? How is it different from conventional engineering process ? Discuss.

(c) Discuss the following process models in brief :

(i) Prototype model

(ii) Spiral model.

2. Attempt any **two** parts of the following : **(2×10=20)**
- (a) What is software requirements specification document ? Briefly discuss the importance of software requirement specification with suitable example..
 - (b) (i) Explain data flow diagram with suitable example.
(ii) What is data modeling ? What is the importance of entity relationship diagram in it ?
 - (c) (i) Compare ISO-9000 and SEI-CMM models.
(ii) Discuss the software quality attributes in brief.
3. Attempt any **two** parts of the following : **(2×10=20)**
- (a) What do you understand by design concept of cohesion measures ? Briefly explain each level of cohesion. Also compare it with coupling measures.
 - (b) Define software metrics. What are various categories of software metrics ? Discuss with the help of examples.
 - (c) Write short notes on :
 - (i) Object Oriented Design
 - (ii) Halstead's software science.
4. Attempt any **two** parts of the following: **(2×10=20)**
- (a) What is software testing ? Briefly discuss the following :
 - (i) Verification and Validation
 - (ii) Alpha, beta and acceptance testing.
 - (b) Describe the white-box testing in detail. Discuss the cyclomatic complexity with suitable example.

- (c) Discuss the following :
 - (i) Formal Technical Reviews (FTR)
 - (ii) Debugging Approaches.

5. Describe any **two** of the following with examples: **(2×10=20)**
- (a) Software Risk Management
 - (b) Software Configuration Management Activities
 - (c) Constructive Cost Models (CoCoMo).