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

PAPER ID : 2475 Roll No. | | | | | | | | | | |

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 white 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 aceptance 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).