

**FIFTH SEMESTER B.TECH. (ENGINEERING) DEGREE
EXAMINATION, DECEMBER 2006**

CH/PTCE 2K 501/PTEE 2K 402—SOFTWARE ENGINEERING

(Common to all branches and AR 2K 502)

Time : Three Hours

Maximum : 100 Marks

Answer all questions.

Part A

1. (a) Define the term software requirement ? What problems arise when natural language is used for requirement definition ?
- (b) State the differences between Verification and Validation.
- (c) Explain how formal languages can be used for formal software specification.
- (d) Discuss the major activities involved in the software design process.
- (e) Specify the importance of software safety and hazard analysis.
- (f) List and briefly explain the activities involved in a business process re-engineering model.
- (g) In brief, explain the features of COCOMO model.
- (h) Explain the steps involved in Software Quality Assurance.

(8 × 5 = 40 marks)

Part B

2. (a) Discuss in detail the waterfall life-cycle model with its advantages and disadvantages. (15 marks)

Or

- (b) (i) List the different classes of non-functional requirement.
- (ii) Explain the basis of behavioural model and its characteristics.

(8 + 7 = 15 marks)

3. (a) Discuss in detail the differences between Object-oriented and Function-oriented design.

Or

- (b) What are the major components of a real time executive system and explain their interactions with each other ?

(15 marks)

4. (a) Discuss the features of clean room approach in software development in detail.

Or

- (b) Explain the different types of software maintenance. How the software maintenance cost is evaluated ?

(15 marks)

Turn over

5. (a) Identify the two objects in software configuration management. Explain the distinct features of those objects.

Or

(b) Discuss in detail about the estimation techniques in software development.

(15 marks)

[4 × 15 = 60 marks]