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Name. Reg. No

FIFTH SEMESTER B.TECH. (ENGINEERING) DEGREE EXAMINATION DECEMBER 2004

CH/PTCE2K 501/PTEE2K 402—SOFTWARE ENGINEERING

Time : Three Hours

Maximum : 100 Marks

Common to all Branches + AR 2K502 + BT 2K 501.

Answer all questions.

- 1. (a) What are the ways of specifying the software requirement? What are the problems arise when natural language is used for requirement definition?
 - (b) Mention the steps involved in the waterfall model of software development.
 - (c) What are the *four* stages in prototype development.
 - (d) Discuss the difference between object-oriented and function-oriented design.
 - (e) What are the importance of software safety and hazard analysis ?
 - (f) Discuss the differences between verification and validation and explain why validation is a difficult process.
 - (g) What are the different types of projects encounter by the software organizations.
 - (h) What do you mean by system building? What are the factors to be considered by the system building team.

 $(8 \times 5 = 40 \text{ marks})$

II. (a) Discuss in detail the requirements engineering processes in detail.

Or

- (b) (i) What are the different classes of non-functional requirement.
 - (ii) What is the basis of behavioral model? What are the characteristics of a behavioral model?

(7 + 8 marks)

III. (a) Explain in detail the object oriented design process with examples.

Or

- (b) Discuss the advantages of graphical information display for user interface and suggest *two* applications where it would be more appropriate to use graphical display in place of numerical information.
- IV. (a) Discuss in detail how the use of software control can increase system safely.