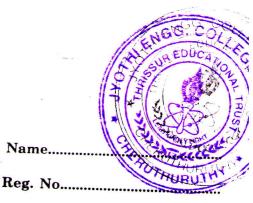
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FIFTH SEMESTER B.TECH. (ENGINEERING) DEGREE EXAMINATION **DECEMBER 2008**

CS 04 501/IT 04 501—SOFTWARE ENGINEERING

(2004 admissions)

Time : Three Hours

Part A

Maximum : 100 Marks

- I. (a) Write notes on relationship of software engineering with operating system.
 - (b) What are the qualities of requirements of Information Systems?
 - (c) How to design module interfaces ? Give example.
 - (d) How anomalies are handled during software design ?
 - (e) Explain how syntax-directed techniques can be applied to programs that are not language
 - (f) What is structured analysis/structured design ? Explain the tools used in it in brief.
 - (g) What are the main activities involved in management functions ? Explain them in brief.
 - (h) What are editors ? What role it plays as a software development tool ?

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

Part B

II. (a) Describe in detail the most important qualities of software products and processes.

Or

- (b) Discuss the principles that may be useful in software development and show how they are related to the principles of software engineering.
- III. (a) Using Finite State Machines, describe a lighting system consisting of one lamp and two buttons. If the lamp is off, pushing either button causes the lamp to switch on and conversely.

Or

- (b) Discuss in detail the key problems to be addressed in concurrent software design.
- IV. (a) Discuss in detail how testing is performed in concurrent and Real Time Systems and issues to be addressed in testing these types of systems.

Or

- (b) Describe in detail the evolutionary model of software production process in detail with example.
- V. (a) What are the various metrics for measuring software productivity ? Explain them in detail.

Or

(b) Discuss in detail the social and ethical responsibilities to be considered in software development.

 $[4 \times 15 = 60 \text{ marks}]$