

FIFTH SEMESTER B.TECH. (ENGINEERING) DECREE EXAMINATION, DECEMBER 2007

## IT/CS 04 501—SOFTWARE ENGINEERING

(2004 Admissions)

Time: Three Hours

Maximum: 100 Marks

Answer all question.

Each question carries 9 marks.

## Section A

- I. (a) Define Software Engineering. What is the role of a software Engineer?
  - (b) With an example, explain the process of abstraction.
  - (c) Write on verification of specification.
  - (d) Draw the DFD for a simplified Banking system.
  - (e) What do you mean by "Code walk throughs" and "code inspections"?
  - (f) Give an account of the theoretical foundations of testing.
  - (g) Explain PERT charts and GANTT charts.
  - (h) What are the ethical and social responsibilities associated with software engineers and managers?

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

## Section B

## Each question carries 15 marks

II. (a) Explain how software Engineering is related to other areas of Computer Science as well as to other disciplines.

Or

- (b) Discuss the Representative qualities of Software Products and Processes.
- III. (a) Discuss any two modularization techniques in detail.

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- (b) Give an outline of Object-Oriented Design.
- IV. (a) Explain white Box and Black Box Testing Techniques.

Or

(b) Compare and Contrast waterfall model and spiral model. List the advantages and disadvantages of both.

Turn over

V. (a) Illustrate predictive models of software cost. How does COCOMO II differ from COCOMO?

Or

(b) Describe briefly any five software production tools.

 $(4 \times 15 = 60 \text{ marks})$