Name : .....

Roll No. : .....

Invigilator's Signature : .....

CS/M.Tech (IT)/SEM-1/PGIT-104/2012-13

2012

SOFTWARE ENGINEERING & CASE TOOLS

Time Allotted : 3 Hours *Full Marks* : 70

The figures in the margin indicate full marks.
Candidates are required to give their answers in their own words as far as practicable.

Question 1 is compulsory and answer any 4 questions from the rest.

1. Draw the network diagram for the following problem and indicate a sequence of plans that the company should want to consider in making a time-cost tradeoff. The company is not interested in reducing the project duration below 29 days. Start with the plan that has the longest duration. 14

Activity	Preceding Activity	Time (days)		Cost ($)	
		Regular Program	Crash Program	Regular Program	Crash Program
A	–	10	9	5,000	5,200
B	–	14	11	3,500	3,950
C	A	8	7	4,000	4,100
D	A	7	2	2,100	3,600
E	B	5	3	2,500	3,000
F	B	10	7	2,250	3,750
G	C	9	9	5,000	5,000
H	D, E	11	9	3,850	5,250
I	G, H	5	3	2,375	3,575

2. What are the characteristics of a good software design ? Explain different types of cohesion along with examples. What do you mean by Code Walk-Trough ? 3 + 7 + 4

3. State the differences between flow chart and structure chart. What are the goodness criteria of Object Oriented Design ? Explain online ticketing system with the help of a sequence diagram. What is an aggregation ? 3 + 3 + 6 + 2

4. Write short notes on the following : 4 + 5 + 5
   i) CASE
   ii) Activity Diagram
   iii) Software Maintenance.

5. a) Explain Top down approach used in integration testing. 5
   b) Explain different types of testing strategy. 6
   c) What is the six sigma quality initiative ? 3

6. a) Draw and explain use case diagram for e-library online public access catalogue. 6
   b) Explain control flow graph with an example. 6
   c) Distinguish between verification and validation. 2