Second Semester Examination – 2013 2014

SOFTWARE ENGINEERING

Time: 3 Hours

Max marks: 70

Answer Question No.1 which is compulsory and any five from the rest.

The figures in the right hand margin indicate marks.

Q1   Answer the following questions: (2 x 10)
- a) What is software crisis? How it is related to evolution of software engineering?
- b) Name six types of software requirement specification as per IEEE standard.
- c) Name the four major components of DFD and how they are depicted?
- d) What is the difference between decision tree and decision table?
- e) Write the application of structured chart.
- f) How is detail design different from Architectural design?
- g) What is meant by Encapsulation in OOSD? Give an example.
- h) Write the primary goal of UML.
- i) Differentiate between black box testing and white box testing.
- j) Differentiate between PERT and CPM.

Q2 a) Give the diagram for the iterative water fall process model. Explain the various phases.   (5)

     b) What are the important activities of the requirement engineering process? Explain.   (5)

Q3 a) Draw the DFD for the following Order Processing System: (5)
The customers send in orders to the system. The system acts on these orders to dispatch goods and invoices to the customers. The system determines the demand of goods by consolidating various orders received from customers. It checks the stock availability and conveys additional requirement of goods to the production shop.

     b) Give an account various types of coupling and cohesion.   (5)

Q4 a) Design an ERD for a hospital consisting of wards, doctors and patients. Clearly highlight entities, relationships, the primary key and the meeting constraints.   (5)

     b) Draw an STD for dialing a number on phone.   (5)

Q5 a) A customer is buying some goods from a supermarket using a debit card. Draw an activity diagram for him to make the final payment in the cash counter and collect the goods.   (5)

     b) Draw the sequence diagram for the process to check into a hotel.   (5)

Q6 a) List the desirable characteristics of a good UI. Name some popular widgets used in GUI and show their use.   (5)

b) Write down the test cases under boundary value analysis for the different grades in BPUT system. (5)

Q7 a) Give the software development plan for a well defined problem. (5)
b) Give an account of different types of risks. Give a risk management strategy. (5)

Q8 Write short notes on any two of the following: (5 x 2)
a) Component level design
b) Object oriented design
c) Software configuration management