

Registration No. :

--	--	--	--	--	--	--	--	--	--

Total number of printed pages – 2

B. Tech  
PEIT 4302

**Sixth Semester Examination – 2013**

**SOFTWARE ENGINEERING**

**BRANCH : IT**

**QUESTION CODE : A 186**

**Full Marks – 70**

**Time : 3 Hours**

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

*The figures in the right-hand margin indicate marks.*

1. Answer the following questions : 2 × 10
  - (a) Which process model is the most suitable for development of technically challenging software products and why ?
  - (b) What are the important activities of the requirements engineering process ?
  - (c) What is the difference between coupling and cohesion ?
  - (d) What is meant by Encapsulation in OOSD ? Give an example.
  - (e) What is the object model of OMT ? Which phase of OMT does it fit ?
  - (f) What does a verb indicate in a noun phrase ? Give an example.
  - (g) What is a fuzzy class? Give an example.
  - (h) What are the different attributes of function point metrics ?
  - (i) What is the difference between COCOMO and COCOMO-II ?
  - (j) Give two examples of web metrics based on web characteristics.
2.
  - (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

**P.T.O.**

3. (a) Draw the DFD for the following Order Processing System :  
 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. 5
- (b) Give an account various types of coupling and cohesion. 5
4. (a) Draw a use case diagram for a customer to place his bid in an e-commerce website and the website will ship the items to the successful bidder. 5
- (b) Write all the use case documents for all the use cases. 5
5. (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) A customer gives the order to buy many products through a shopping cart in an e-commerce site and gets the total bill. He then pays the amount using a debit card to get the good at the specified delivery point as specified by him. Draw a state chart diagram for this. 5
6. (a) Write down the test cases under boundary value analysis for the different grades in BPUT system. 5
- (b) What is LOC ? Give the table for conversion of LOC for various languages to Function Point. Why it is different for various languages ? Explain. 5
7. (a) The size of the organic type of software project is 50 KLOC. If unit cost of effort is Rs. 20,000/- per PM, estimate the development time and cost of the software project. 5
- (b) Give an account of a simple web design process. Explain different process models in this web design. 5
8. Write any **two** of the following : 5×2
- (a) Prototyping model
- (b) Jacobson's model
- (c) Metrics for object oriented design (MOOD)