Registration No. :

Total number of printed pages – 2

Sixth Semester Back Examination – 2015
SOFTWARE ENGINEERING
BRANCH : IT
QUESTION CODE : M 181

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) What do you mean by a software process ?

    (b) What are the objectives of feasibility study phase of software development ?

    (c) What is software development life cycle ?

    (d) Define the 'V' model.

    (e) What is represented by using UML diagram ?

    (f) List 3 common types of risks that a typical software project might suffer from.

    (g) Define complete COCOMO model.

    (h) What do you mean by Noun Phrase approach ?

    (i) What is Bang Metrics ?

    (j) What do you mean by product visibility in the context of software development?

2. (a) What do you understand by the term life cycle model of software development ? What problems might a software development organization face if it does not follow any life cycle models during development of a large software product ?   5

    (b) While using the iterative waterfall model to develop a commercial software product in an industry scenario, discuss how the effort spent on the different phases is spread over time.   5

3. (a) Explain how a software development effort is initiated and finally terminated in the spiral model. 5

   (b) Explain the different phases involved in waterfall life cycle. 5

4. (a) What are the purposes of Data Flow diagrams, Entity-Relationship diagrams ? Give an example diagram of each. 5

   (b) What is data modeling ? Give 5 examples for data modeling. 5

5. (a) Discuss the major differences between the function oriented and the object oriented approaches to software design. Corroborate your answer through suitable examples. 5

   (b) Write different types of requirements gathering activities that the analysts use to gather requirements from a customer. 5

6. (a) What is user acceptance testing ? Explain different testings in user acceptance testing. Why is it necessary ? 5

   (b) Draw a class diagram using UML to represent the fact that an order Register consists of many orders. Each order consists of up to ten items. Each order item contains the name of the item, its quantity and the date by which it is required. Each order item is described by an item order specification object having details such as its vendor address, its unit price and manufacturer. 5

7. (a) Design the black box test suite for a program that accepts two strings and checks if the first string is a substring of the second string and displays the number of times the first string occurs in the second string. 5

   (b) Define Web Engineering. Discuss the Web Design principles. 5

8. Write short notes any **two** of the following : 5×2

   (a) Mapping DFD into Structure Chart

   (b) Integration Testing

   (c) CRC Card Approach

   (d) Web metrics.

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