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Question Paper Code: 41231

M.E. DEGREE EXAMINATION, DECEMBER 2014.

First Semester

Computer Science and Engineering

14PCS102 – OBJECT ORIENTED SOFTWARE ENGINEERING

(Regulation 2014)

Duration: Three hours Maximum: 100 Marks

Answer ALL Questions.

PART A - (5 x 1 = 5 Marks)

1. Which UML model describes the structure of a system in terms of objects, attributes, associations and operations?
   (a) functional model (b) static model (c) dynamic model (d) object model

2. Interactions between the actors and the system are represented by
   (a) Entity objects (b) Control objects (c) Boundary objects (d)Dynamic objects

3. Identify the subsystem is responsible for managing the sequence of interactions with the user
   (a) model (b) view (c) controller (d) initiator

4. Which one of the following is always true for all instances of a class and specifies consistency constraints among class attributes?
   (a) contract (b) invariant (c) signature (d) interactions

5. Which management in SCM is responsible for anticipating the conflicts and enforce communication between relevant teams?
   (a) promotion (b) branch (c) variant (d) change

PART - B (5 x 3 = 15 Marks)

6. Define the terms related to software engineering concepts: Activities, Tasks, and Resources.
7. What are Entity, Boundary, and Control Objects?
8. List the management issues related to system design.
9. Object design includes four groups of activities, what are they?
10. Distinguish four levels of rationale capture.

PART - C (5 x 16 = 80 Marks)

11. (a) (i) Brief about the technical activities associated with object-oriented software engineering. (8)

(ii) Briefly describe the activities involved in managing a software engineering project. (8)

Or

(b) (i) What is the difference between a role and a participant? Can a role be shared between two or more participants? Why or why not? (6)

(ii) Explain in detail the tools to support project communication. (10)

12. (a) (i) Describe the main requirements elicitation concepts. (12)

(ii) List the activities of requirements elicitation. (4)

Or

(b) (i) Describe UML activity diagram with an example. (8)

(ii) Describe Analysis Object Models and Dynamic Models. (8)

13. (a) Describe subsystem decompositions and their properties in detail. (16)

Or

(b) Describe in detail the system design activities that address the design goals. (16)

14. (a) (i) Describe the issues related to documenting and managing interface specifications. (10)

(ii) Give the importance of testing. Discuss in detail Usability testing. (6)

Or

(b) Describe the following Mapping activities:
(i) Mapping Associations to Collections
(ii) Mapping Contracts to Exceptions
(iii) Mapping Object Models to a Persistent Storage Schema (16)

15. (a) (i) Brief about the main concepts of configuration management. (8)

(ii) Compare software life cycle models. (8)

Or

(b) Discuss in detail classical methods to project management and agile methods to project management. (16)