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Question Paper Code : 82267

M.E. DEGREE EXAMINATION, NOVEMBER/DECEMBER 2013.

First Semester

Software Engineering

SE 9213/SE 912 — OBJECT ORIENTED SOFTWARE ENGINEERING

(Common to M.E. Computer Science and Engineering)

(Regulation 2009)

Time : Three hours Maximum : 100 marks

Answer ALL questions.

PART A — (10 × 2 = 20 marks)

1. What is a Model and what are its limitations?

2. Differentiate between a scenario and a use case. When do we use them?

3. Can a role be shared by two participants? – Justify your answer.

4. What are nonfunctional requirements? Give four examples of such requirements.

5. What are control objects? Give two examples.

6. "Decomposing a system into subsystems decreases the complexity of the system and increases the number of interfaces to be implemented" — Comment on this statement.

7. What is Refactoring? How is this helpful in system design?

8. How is debugging different from testing?

9. Establish the need for configuration management with two concrete reasons.

10. What are the advantages of flat staffing versus gradual testing?

PART B — (5 × 16 = 80 marks)

11. (a) (i) Establish with an example that Knowledge acquisition is a nonlinear process. (8)

(ii) Distinguish between Activity and Task giving examples from a typical software engineering project. (8)

Or

(b) Illustrate the following relationships that can be represented using a Use-case diagram taking an example project of your choice :

(i) Communication relationship

(ii) Include relationship

(iii) Extend relationship

(iv) Inheritance relationship. (16)

12. (a) Give an overview of the requirements elicitation process highlighting the difficulties and challenges involved. Also, suggest suitable methods to overcome the difficulties. (16)

Or

(b) (i) Differentiate between object model and dynamic model and discuss about their applicability in analyzing systems. (6)

(ii) Explain the process of identifying Entity and Boundary objects with suitable examples. (10)

13. (a) Explain and briefly discuss the role of coupling and cohesion in system design. (16)

Or

(b) (i) Explain the Model-View controller architecture style and give an example where this architecture style is suitable. (8)

(ii) Describe the various criteria involved in identifying the design goals. (8)

14. (a) (i) Explain how design patterns and components promote reuse. (8)

(ii) Discuss about the difficulties involved in reuse and outline how this could be managed effectively. (8)

Or

(b) (i) Define Fault, Failure and Erroneous state taking an example from real world scenario. (6)

(ii) Discuss about the usefulness of stubs and drivers in testing object oriented systems. (10)

15. (a) (i) Give an overview of Rationale. (8)

(ii) Enumerate and explain the heuristics for communicating about Rationale. (8)

Or

(b) Write short notes on the following :

(i) Versions and Baselines. (8)

(ii) Project initiation and termination. (8)

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