Reg. No. : ☐☐☐☐☐☐☐☐☐☐☐☐☐

Question Paper Code : **63329**

M.E. DEGREE EXAMINATION, NOVEMBER/DECEMBER 2015.

Elective

Computer Science and Engineering

CP 7022 — SOFTWARE DESIGN

(Common to M.E. Biometrics and Cyber Security, M.E. Computer Science and Engineering (With specialization in Networks))

(Regulations 2013)

Time : Three hours   Maximum : 100 marks

Answer ALL questions.

PART A — (10 × 2 = 20 marks)

1. Briefly explain the need to design software.

2. Define Refactoring.

3. How are OOA, OOD and OOP related?

4. What are the five main kinds of programming styles with respect to the kinds of abstractions?

5. What is a Design Pattern? State the benefits offered by patterns.

6. What are the common causes of redesigning in design pattern?

7. What is data flow design?

8. List the three fundamental types of service in Service candidate identification.

9. State the principles of user centered design.

10. State the purpose of Reviews and Walkthroughs.

PART B — (5 × 16 = 80 marks)

11. (a) (i) Explain the major phases of software design process. (8)

    (ii) Explain the characteristics of an exceptional designer. (8)

Or

    (b) Explain the terms in software modeling (4 × 4 = 16)

        (i) Modularity

        (ii) Hierarchy

        (iii) Coupling

        (iv) Cohesion.

12. (a) Explain the terms encapsulation, concurrency, persistence as elements of object model. (16)

Or

    (b) (i) How to measure the quality of an abstraction? Explain. (6)

        (ii) Explain any three object oriented analysis methods. (10)

13. (a) How does design patterns solve design problems? Write a detailed note. (16)

Or

    (b) (i) Draw any two design pattern for university system. (8)

        (ii) How to document reusable solutions. (8)

14. (a) Explain service identification and service design in service oriented design. (16)

Or

    (b) (i) Discuss in detail about structural decomposition. (8)

        (ii) Explain about choreography and orchestration in service oriented design. (8)

15. (a) (i) Explain about Golden rules in user centered design. (8)

        (ii) Explain the interface design activities with diagram. (8)

Or

    (b) (i) Explain about testing in design review. (8)

        (ii) Discuss about walk throughs in design review. (8)

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