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Question Paper Code : 60305

M.E. DEGREE EXAMINATION, MAY/JUNE 2017.

Elective

Computer Science and Engineering

CP 7022 — SOFTWARE DESIGN

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

(Regulations 2013)

Time : Three hours

Maximum : 100 marks

Answer ALL questions.

PART A — (10 × 2 = 20 marks)

1. Show diagrammatically the mapping of software analysis to software design model.
2. State any five software design heuristics.
3. What is a Model?
4. List the sources of key abstraction.
5. What is "Gang of Four" book?
6. What are reuse hierarchies?
7. What is meant by orchestration?
8. What is a function oriented design?
9. Give the situations beneficial for expert participation in review.
10. Give any two golden guidelines given by pressman for a successful design review.

PART B — (5 × 13 = 65 marks)

11. (a) (i) Discuss in details the software design guidelines. (8)
(ii) Explain the objectives of compartmentalization of data and functions in a software design. (5)

Or

- (b) (i) Discuss in details the software design principles. (8)
(ii) Explain the concept of program partitioning in a software design with an example. (5)

12. (a) Discuss in detail the process of identifying design elements in OO design of a software.

Or

- (b) Discuss the principles of Object orientation with an example.

13. (a) Elaborate on the components of the Design pattern template.

Or

- (b) Explain about the classification of the standard patterns in the GOF book.

14. (a) (i) Discuss in detail the characteristics of services. (8)
(ii) Detail on the differences between product and service design. (5)

Or

- (b) (i) Discuss about the performance priorities in service design. (8)
(ii) Write about the three contrasting service designs with example. (5)

15. (a) Give a comparison of review methodologies.

Or

- (b) Discuss the steps in User Centered design.

PART C — (1 × 15 = 15 marks)

16. (a) Identify the key abstractions for a Railway Reservation system.

Or

(b) Draw the various diagrams for a simple sales order application.
