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**Question Paper Code : 13280**

M.E. DEGREE EXAMINATION, NOVEMBER/DECEMBER 2014.

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)

(Regulation 2013)

Time : Three hours

Maximum : 100 marks

Answer ALL questions.

PART A — (10 × 2 = 20 marks)

1. Define the term : software process.
2. What is data abstraction?
3. Define the term : Object.
4. What is Business use case?
5. How will you trace errors in software design?
6. What is the characteristic feature of object oriented software?
7. What is the need for usability engineering?
8. What is software modeling?
9. Define the term : walkthrough.
10. How will you review a software design?

PART B — (5 × 16 = 80 marks)

11. (a) What are coupling and cohesion? How will you measure and manage it for large scale software systems? (16)

Or

- (b) (i) What is modularity? Where it is used? (8)
- (ii) What is software maturity index? How will you measure it? (8)

12. (a) How will you design a class diagram for an application? Illustrate with an example. (16)

Or

(b) Describe the application of sequence diagram. Give suitable examples. (16)

13. (a) What is re-usability? How will you create re-usable software components? Give examples. (16)

Or

(b) (i) How will you identify applicable design patterns for the software solution? (8)

(ii) Give the elements of reusable object oriented software. (8)

14. (a) (i) Give a brief note on choreography. (8)

(ii) What is meant by function oriented design? Explain briefly. (8)

Or

(b) (i) How will you document reusable design patterns? (8)

(ii) How will you develop an appropriate design for a given set of requirements? (8)

15. (a) (i) What are the testing strategies to review a software design? (8)

(ii) What is acceptance testing? How it is conducted for software design? (8)

Or

(b) (i) List the principles of user centered software design. (8)

(ii) How will you evaluate a given design against the Software Requirements Specification (SRS)? (8)