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Question Paper Code : 21384

B.E./B.Tech. DEGREE EXAMINATION, NOVEMBER/DECEMBER 2015.

Fifth Semester

Computer Science and Engineering

CS 2301/CS 51/10144 CS 502 — SOFTWARE ENGINEERING

(Regulations 2008/2010)

(Common to PTCS 2301/10144 CS 502 — Software Engineering for B.E. (Part-Time)
Fifth Semester CSE – Regulations 2009/2010)

Time : Three hours

Maximum : 100 marks

Answer ALL questions.

PART A — (10 × 2 = 20 marks)

1. Differentiate between verification and validation.
2. State the advantages and disadvantages of the water fall model.
3. What is a data dictionary?
4. What is a volatile requirement?
5. What are called as design heuristics?
6. What do you understand by “Real Time Executive”?
7. What is “Cyclomatic Complexity”? State its primary use.
8. Between “Statement Coverage and Branch Coverage”, which is a stronger criteria? Why?
9. What is earned value analysis?
10. Differentiate between preventive and corrective maintenance.

PART B — (5 × 16 = 80 marks)

11. (a) (i) Explain the systems engineering hierarchy with a suitable diagram. (9)
(ii) Explain the RAD development model and state its merits and demerits. (7)

Or

- (b) (i) Give an overview of the business process engineering with a diagram. (8)
(ii) Outline the features of spiral model. (8)
12. (a) (i) What are called as non functional requirements? Explain in detail. (8)
(ii) Explain the use of data flow models with an example. (8)

Or

- (b) (i) Explain the importance of software prototyping. (7)
(ii) Describe the state machine behavioral model with a neat diagram. (9)
13. (a) (i) Explain the salient features of data acquisition systems. (8)
(ii) Explain the various architectural styles in brief. (8)

Or

- (b) (i) Explain the generic architecture of a monitoring and control system. (9)
(ii) Explain the concept of modularity and its importance in design of software. (7)
14. (a) (i) Explain the equivalence class partitioning method with an example. (8)
(ii) Explain the concept of data flow based testing. (8)

Or

- (b) (i) Explain the use of drivers and stubs in unit testing. (6)
(ii) Explain "Regression Testing" and its importance in practice. (6)
(iii) Explain the importance of validation testing. (4)
15. (a) (i) Explain the salient features of the COCOMO model. (8)
(ii) Outline the importance of "Project Scheduling and the use of Gantt charts". (8)

Or

- (b) Write short notes on the following :
- (i) Functions of software configuration management (7)
(ii) Risk management (5)
(iii) CASE Tools. (4)