Reg. No. : | | | | | | | | | | | | |

Question Paper Code : 60384

B.E./B.Tech. DEGREE EXAMINATION, NOVEMBER/DECEMBER 2016.

Fifth Semester

Computer Science and Engineering

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

(Regulations 2008/2010)

(Common to PTCS 2301 – Software Engineering for B.E. (Part-Time)
Fifth Semester – Computer Science and Engineering – Regulations 2009)

Time : Three hours Maximum : 100 marks

Answer ALL questions.

PART A — (10 × 2 = 20 marks)

1. State the characteristics of the RAD model.

2. Distinguish between software Verification and Validation.

3. What are known as "Volatile Requirements"?

4. What is "Entity Relation Attribute" Modeling?

5. Differentiate between Transform Centre and Transaction Centre.

6. List the benefits offered by architectural styles.

7. What is the significance of "Fan-in and Fan-out"?

8. Differentiate between White Box and Black Box testing.

9. What is "Cyclomatic Complexity"? Mention its use.

10. Name different types of software maintenance.

PART B — (5 × 16 = 80 marks)

11. (a) (i) Explain the systems engineering hierarchy with a suitable diagram. (9)

(ii) Give an overview of the Business Process Engineering with a diagram. (7)

Or

(b) (i) Outline the features of the Product Engineering with the help of a diagram. (8)

(ii) Give a brief comparison between various life cycle models. (8)

12. (a) (i) Show the various categorization of Non Functional requirements and explain. (6)

(ii) Give a brief note on the importance of Feasibility Studies. (4)

(iii) Explain the software prototyping model and its use in requirements definition process. (6)

Or

(b) (i) Explain the state machine behavioural model with an example. (10)

(ii) Outline the contents of Data Dictionary and its use. (6)

13. (a) (i) List down the various software design principles. (4)

(ii) Name and explain the different types of Coupling. (6)

(iii) Explain the various categories of Architectural Styles. (6)

Or

(b) (i) Explain the components of Real Time Operating System with a diagram. (6)

(ii) Describe the various activities associated with User Interface Design. (6)

(iii) Explain the important Data Design principles. (4)

14. (a) (i) Explain the cause effect graph testing technique in detail. (6)

(ii) Explain the top down and bottom up testing strategies. (6)

(iii) For the following code portion, design suitable test cases to ensure both the "Branch coverage and Condition converage" (4)

```
{
 int a,b;
 if ((a = = 0) && (b>0))
   then print ("success");
}
```

Or

(b) (i) What are Drivers and Stubs? Explain their use. (5)

(ii) Explain the Basis Path testing technique with an example. (6)

(iii) Outline the contents of a typical test plan. (5)

15. (a) (i) Explain the function point estimation method in detail. (7)

(ii) Explain the risk management process with a suitable diagram. (5)

(iii) Describe the use of Gantt charts in project scheduling. (4)

Or

(b) (i) Describe the basic elements of software configuration management. (7)

(ii) Explain the Delphi estimation method. (5)

(iii) Explain the significance of software Reuse. (4)

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