(6 pages)

2321/SCS8C53 **APRIL 2011**

SOFTWARE ENGINEERING

(For those who joined in July 2008 and 2009)

Time : Three hours Maximum : 75 marks

SECTION A — ($10 \times 1 = 10$ marks)

Answer ALL questions.

Choose the correct answer :

1. ———— is a major factor that determines the level of management control and the types of tools and techniques required on a software project

(a) Project time (b) Project size

(c) Project allocation (d) Project maintenance.

2. ———— is the ability of a program to perform a required function under stated conditions for a stated period of time

(a) Reliability (b) Portability

(c) Accuracy (d) Robustness.

3. ———— programs are written to provide user processing environments and make sophisticated use of operating system facilities

(a) Application (b) Assembly

(c) System (d) User-defined.

4. A ———— is a hierarchical chart that accounts for the individual parts of a system

(a) Flow chart

(b) Flow diagram

(c) Expert judgement

(d) Work Breakdown structure.

5. The software requirements specification is based on the system ————

(a) Design (b) Definition

(c) Maintenance (d) Structure.

6. The term ———— refers to the fact that permissible operations on the data objects are emphasized, while representation details of the data objects are suppressed

(a) Abstract Data Type

(b) Data Mining

(c) Data Independence

(d) Class.

7. ———— systems have independent processes that can be activated simultaneously if multiple processors are available

(a) Parallel (b) Modular

(c) Concurrent (d) Hybrid.

8. According to Franta, a ———— system consists of a collection of nearly autonomous processors that communicate to achieve a coherent computing system

(a) Distributed (b) Real-time

(c) Discrete (d) Continuous.

9. ———— is a planned and systematic pattern of all actions necessary to provide adequate confidence that the item or product conforms to established technical requirements

(a) Flow chart

(b) Flow diagram

(c) UML

(d) Quality assurance.

10. ———— is concerned with tracking and controlling of the work products that constitute a software product

(a) Configuration Management

(b) Data Abstraction

(c) DBA

(d) System Analyst.

SECTION B — ($5 \times 7 = 35$ marks)

Answer ALL questions, choosing either (a) or (b).

11. (a) Write short notes on : project size categories.

Or

(b) What are the factors to consider in project planning? Explain them.

12. (a) Explain any THREE factors that influence software cost.

Or

(b) Write short notes on : Delphi cost estimation.

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13. (a) What are the desirable properties that a software requirements specification should possess? Explain.

Or

(b) Write short notes on : PSL/PSA.

14. (a) Discuss about modules and modularization criteria.

Or

(b) Write short notes on : Test Plans.

15. (a) What is meant by static analysis? Discuss about some static analysis capabilities.

Or

(b) Discuss briefly about source-code metrics.

SECTION C — (3 × 10 = 30 marks)

Answer any THREE questions.

16. Explain about quality and productivity factors.

17. Discuss in detail, staffing - level estimation.

18. Explain about formal specification techniques.

19. Describe in detail, design notations.

20. Explain about enhancing maintainability during development.

———————

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