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B.C.A. (CBCS) DEGREE EXAMINATION, APRIL 2013.

Fifth Semester

Computer Application – Main

Paper VI – SOFTWARE ENGINEERING

(For those who joined in July 2008 to 2011)

Time : Three hours Maximum : 75 marks

PART A — (10 × 1 = 10 marks)

Answer ALL questions.

Choose the correct answer :

1. Deciding in detail how the user is to interact the system is called ————————

(a) systems engineering

(b) software architecture

(c) detailed design

(d) user interface design

2. An abstraction of a set of subclasses

(a) variable (b) attribute

(c) association (d) superclass

3. Those who buy the software are called

(a) Customers and users

(b) Managers

(c) Resources

(d) Engineers

4. ———————— measures the amount of time that a server is running and available to respond to users.

(a) availability (b) reliability

(c) maintainability (d) none

5. UML has a detailed ———————— describing the meaning of the various notations.

(a) Semantics (b) Syntax

(c) State (d) Activity

6. A ———————— diagram shows the sequence if message exchanged by the set of objects performing certain task

(a) sequence (b) collaboration

(c) class (d) state

7. The space of possible designs that could be achieved by choosing different sets of alternatives is called the ———————— space.

(a) design (b) modelling

(c) alternative (d) none

8. A good ———————— provides information hiding.

(a) database (b) all

(c) module (d) abstraction

9. An ———————— error is a defect in which a program inappropriately loops one too many times or one too few times.

(a) absolute (b) off-by-one

(c) relative (d) none

10. A ———————— condition occurs when there is normally more than one of something, but sometimes there is only one.

(a) null

(b) singleton

(c) non-singleton

(d) None

PART B — (5 × 5 = 25 marks)

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

11. (a) What is Software Engineering? Explain.

Or

(b) Discuss the types of evolutionary projects.

12. (a) What is a requirement?

Or

(b) Define the problem and the scope for a system that handles university degree requirements and registration. Also develop a requirements statement.

13. (a) What are the essentials of UML class diagrams? Explain.

Or

(b) Write notes on labeling associations.

14. (a) Discuss on Design as a Series of decisions.

Or

(b) Write notes on parts of a system.

15. (a) Explain how to test for incorrect logical conditions.

Or

(b) Explain use of inappropriate standard algorithms.

PART C — (5 × 8 = 40 marks)

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

16. (a) Explain software quality.

Or

(b) What are the activities commonly found in software engineering project? Explain.

17. (a) What are non - functional requirements? Explain the different categories of non - functional requirements? Explain.

Or

(b) Summarize the functional requirements for an embedded software system which allows a user to control a microwave oven.

18. (a) Explain generalization.

Or

(b) Explain the more advanced features of class diagram 'Aggregation' in detail.

19. (a) Explain the technique for making good design decision.

Or

(b) Explain software architecture.

20. (a) Explain the most common kinds of defects found in ordinary algorithm.

Or

(b) Explain the defects in numerical algorithm.

———————