AVINASHILINGAM INSTITUTE FOR HOME SCIENCE AND HIGHER EDUCATION FOR WOMEN, COIMBATORE – 641 043

Master's Degree Examination – November 2017

I Semester

Class : I PG **Maximum Marks: 60**

Major : MBA (IT Organization and Administration) **Time: 3 Hours**

17MBMC06 – System Analysis and Design

PART – A **10 × ½ = 5**

Answer the following

Choose the correct answer

1. SDLC stands for

   (a) System Development Life Cycle (b) Structure Design Life Cycle

   (c) System Design Life Cycle (d) Structure development Life Cycle

2. The type of prototype used during the analysis phase is the

   (a) Design prototype (b) Evolving prototype (c) Discovery prototype

   (d) Functioning prototype

3. A data flow can

   (a) Only emanate from an external entity (b) Only terminate in an external entity

   (c) May emanate and terminate in an external entity

   (d) May either emanate or terminate in an external entity but not both

4. Documentation is prepared

   (a) At every stage (b) At system design (c) At system analysis (d) At system development

5. The structure chart is

   (a) A document of what has to be accomplished

   (b) A statement of information processing requirement

   (c) A hierarchical partitioning of the program (d) All of the above

6. Which of the following is not a characteristic of good test data?

   (a) Users do not participate at this preliminary stage (b) Should be comprehensive

   (c) Every statement should be executed (d) All of the above

7. What is the programming style of the object oriented conceptual model?

   (a) Invariant relationships (b) Classes and objects (c) Algorithms

   (d) Goals, often expressed in a predicate calculus

8. The fact that the same operation may apply to two or more classes is called

   (a) Inheritance (b) Polymorphism (c) Encapsulation (d) Multiple classification

9. The UML class diagram also referred to as

   (a) Dynamic modeling (b) Static modeling (c) Object modeling (d) Test modeling

10. _____ diagram is a graph of nodes connected by communication association.

    (a) Component (b) Deployment (c) State-transition (d) Use case

PART – B

$5 \times 4 = 20$

Answer ALL questions

Each answer should not exceed 200 words or one page

11. (a) Explain the waterfall model of software development process.

(OR)

(b) Give a short note on Agile software development.

12. (a) Briefly analyze the functional requirements.

(OR)

(b) What is a Data Dictionary? Give an example.

13. (a) Define Coupling and cohesion.

(OR)

(b) Differentiate between system testing and user acceptance testing.

14. (a) Why do we model? Explain.

(OR)

(b) Write a note Dynamic binding.

15. (a) Discuss briefly Package diagram.

(OR)

(b) What are the characteristics of an OOUI?

PART – C

$5 \times 7 = 35$

Answer ALL questions

Each answer should not exceed 600 words or onepage

Question No. 20 is compulsory.

16. (a) Describe System Development Life Cycle and explain its various phases.

(OR)

(b) Explain the Spiral Model. What are the advantages of this model?

17. (a) Briefly discuss the structured requirement representation techniques.

(OR)

(b) Analyze the IEEE standards for software engineering processes and specification.

18. (a) Discuss about the Designing Software System.

(OR)

(b) Identify the different software testing techniques.

19. (a) What is object? Discuss the main characteristics of the object with examples from the real world.

(OR)

(b) What is inheritance? What are different uses of an inheritance? Explain.

Compulsory:-

20. Develop a class diagram for the following scenario:

A company is organized into departments. Each department has employees working in it. The attributes of department include department number and department name. The attributes of employees include employee number, employee name, date of birth, gender, date of joining, designation, basic and pan. Each department has a manager managing it. There are also supervisors in each department who supervise a set of employees. Each department controls a number of projects. The attributes of project include project code and project name. A project is controlled only by one department. An employee can work in any number of distinct projects on a day. The date an employee worked, in time and out time has to be kept track.

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