REV-01
MCA/22/27

2024/11

SET B

MASTER OF COMPUTER APPLICATION
THIRD SEMESTER
ADVANCED SOFTWARE ENGINEERING
MCA-301

[USE OMR FOR OBJECTIVE PART]

Duration: 3 hrs. **Full Marks: 70**

Time: 30 min. **Marks: 20**

(Objective)

1X20=20

Choose the correct answer from the following:

1. In Design phase, which is the primary area of concern?
   a. Architecture
   b. Data
   c. Interface
   d. All of the above

2. Effective risk management plan needs to address which of these issues?
   a. Risk avoidance
   b. Risk monitoring
   c. Contingency Planning
   d. All of the above

3. Which of the following risks are derived from the project level?
   a. Lack of user involvement.
   b. Insufficient project management.
   c. Ineffective integration
   d. None of these

4. Effort is measured using which one of the following units:
   a. Person
   b. Person-months
   c. Months
   d. Rupees

5. Which of the following is not part of the Test document?
   a. Test Case
   b. Requirements Traceability Matrix [RTM]
   c. Test strategy
   d. Project Initiation Note [PIN]

6. COCOMO stands for _____.
   a. COnsumed COst estimation Model
   b. COnstructive COst estimation MOdel
   c. COmmon COntrol estimation MOdel
   d. COmposite COst estimation MOdel

7. Which one of the following life cycle models does not involve constructing a prototype during the entire development of the software?
   a. Spiral model
   b. Prototyping model
   c. RAD model
   d. Evolutionary model

8. Which one of the following project parameters is usually the first to be estimated by a project manager:
   a. Cost
   b. Effort

c. Size
d. Duration

9. _____ is / are the most important and fundamental phases of SDLC.
   a. Preliminary investigation
   b. Requirement Analysis
   c. Design, Testing and Implementation
   d. All of the mentioned above

10. Misinterpretation of customer communication is a sample of possible cause defects.
   a. True
   b. False

11. The contents of the SRS document are
   a. Functional requirements
   b. Nonfunctional requirements
   c. Goals of implementation
   d. All of these

12. Software reengineering encompasses a series of activities that include—
   a. Inventory analysis
   b. Document restructuring
   c. Reverse engineering
   d. All of these

13. Data dictionary contains details of ----------
   a. data structures
   b. data flows
   c. data stores
   d. All of these

14. Which of the following serves as metrics for project size estimation?
   a. Lines of code
   b. Function point
   c. Number of persons
   d. Only (a) and (b)

15. The model remains operative until the software is retired.
   a. Waterfall
   b. Incremental
   c. Spiral
   d. None of these

16. Model selection is based on _____.
   a. Requirement
   b. Development team and users
   c. Project type & associated risk
   d. All of the above

17. --------- coupling is the worst type of coupling.
   a. Data
   b. Content
   c. Control
   d. Stamp

18. What is the key objective of Integration testing?
   a. Modeling Errors
   b. Interface Errors
   c. Procedure Errors
   d. None of the mentioned

19. Modifying the software to match changes in the ever changing environment is called ---------- maintenance.
   a. Corrective
   b. Adaptive
   c. Perfective
   d. Preventive

20. Which one of the following is not a software process quality?

a. Efficiency

b. Portability

c. Timeliness

d. Reliability

-- --- --

(Descriptive)

Time : 2 hrs. 40 min. Marks : 50

[Answer question no.1 & any four (4) from the rest]

1. What is software life cycle model? Why is it important? What are the different types of problem may arise in case Software Life Cycle Model is not followed for developing large software? 2+3+5=10

2. What do you mean by prototype? Explain Prototyping model with diagram. Mention the situations when this model is suitable. 1+7+2=10

3. List the five desirable characteristics of a good Software Requirements Specification (SRS) documents. Why SRS document also known as the black-box specification? Who are the different categories of users of the SRS document? 5+2+3=10

4. a. What is DFD? Explain how DFD is constructed. 6+4=10
   b. What is UML? What are the different system view that can be model using UML.

5. What do you mean software design? Discuss the outcome of a software design. Define cohesion and coupling in context of software design. 2+4+4=10

6. What are the different metrics for software project size estimation? What is COCOMO model? Discuss the basic COCOMO model. 1+6+1+2=10

7. What do you mean by software testing? Which testing is performed by the customer? Explain white box testing and black box testing with example. 2 +1+7=10

8. **Write note on the following:** 5+5=10
   a) Software Reverse Engineering
   b) Job Responsibilities of Project Manager

= = *** = =