



BRAINWARE UNIVERSITY

Term End Examination 2022
Programme – MCA-2020/MCA-2021
Course Name – Software Engineering and TQM
Course Code - MCA303
(Semester III)

Full Marks : 60

Time : 2:30 Hours

[The figure in the margin indicates full marks. Candidates are required to give their answers in their own words as far as practicable.]

Group-A

(Multiple Choice Type Question)

1 x 15=15

1. Choose the correct alternative from the following :

- (i) Degree to which design specifications are followed in manufacturing the product is called, choose one
- | | |
|----------------------|---------------------------|
| a) Quality Control | b) Quality of conformance |
| c) Quality Assurance | d) None of the mentioned |
- (ii) What is not included in prevention costs, justified by
- | | |
|---------------------|--|
| a) quality planning | b) formal technical reviews |
| c) test equipment | d) equipment calibration and maintenance |
- (iii) Define prototype?
- | | |
|-------------------------------------|----------------------------------|
| a) Mini-model of existing system | b) Mini-model of proposed system |
| c) Working-model of existing system | d) None of these |
- (iv) If the software process were not based on scientific and engineering concepts then it would be easier to re-create new software than to scale an existing one, is known as _____
- | | |
|-------------------|-----------------------|
| a) Cost | b) Dynamic Management |
| c) Large Software | d) Scalability |
- (v) Select the option that is the understanding of software product limitations, learning system related problems or changes to be done in existing systems beforehand, identifying and addressing the impact of project on organization and personnel etc?
- | | |
|--------------------------|----------------------|
| a) Software Design | b) Feasibility Study |
| c) Requirement Gathering | d) System Analysis |
- (vi) Identify the following are parameters involved in computing the total cost of a software development project?
- | | |
|--------------------------------|-------------------------|
| a) Hardware and software costs | b) Effort costs |
| c) Travel and training costs | d) All of the mentioned |
- (vii) Predict decomposition technique required?

- a) Software project estimation is a form of problem solving
 b) Developing a cost and effort estimate for a software project is too complex
 c) All of the mentioned
 d) None of the mentioned
- (viii) Distinguish the ISO 9001 is not concerned with _____ of quality records.
 a) Collection
 b) Maintenance
 c) Verification
 d) Dis-positioning
- (ix) In employ the OOD, the attributes (data variables) and methods (operation on the data) are bundled together is called _____.
 a) Classes
 b) Object
 c) Encapsulation
 d) Inheritance
- (x) UML stands for solution .
 a) United Modelling Language
 b) Uniform Modelling Language
 c) Unified Modelling Language
 d) None
- (xi) Compute one of these belongs to integration testing in the OO context?
 a) Unit testing
 b) Regression testing
 c) Sandwich testing
 d) Thread-based testing
- (xii) Employ test cases are based on what?
 a) Decision table
 b) Design
 c) Code
 d) Requirements
- (xiii) In case of Large Systems decide
 a) Only few tests should be run
 b) Test Cases written by good test engineers should be executed
 c) Only Good Test Cases should be executed
 d) Testing should be on the basis of Risk
- (xiv) Which of the following is not a business goal of re-engineering, choose one
 a) Cost reduction
 b) Time reduction
 c) Maintainability
 d) None of the mentioned
- (xv) Reverse engineering is the process of deriving the system design and specification from its, choose one
 a) GUI
 b) Database
 c) Source code
 d) All of the mentioned

Group-B

(Short Answer Type Questions)

3 x 5=15

2. What are the major characteristics of an SRS document? (3)
 3. Explain the difference between Verification and Validation (3)
 4. Write short note on: McCall's Quality Triangle (3)
 5. What is software reliability? (3)
 6. Briefly discuss advantages and disadvantages of spiral model. (3)

OR

What are the advantages of using evolutionary model? (3)

Group-C

(Long Answer Type Questions)

5 x 6=30

7. Suppose a project was estimated to be 400 KLOC. Calculate the effort and development time for each of the three model i.e., organic, semi-detached and embedded. (5)
 8. Briefly describe different types of coupling among modules. (5)
 9. When do a system analyst choose the RAD model? (5)
 10. Maintenance testing is performed using which methodology? Justify (5)
 11. Is there any difference between Reverse Engineering and Re-engineering? justify your answer (5)

12. Draw the DFD of Library Management System.

(5)

OR

What do you mean by leveling of DFD?

(5)
