



## BRAINWARE UNIVERSITY

Term End Examination 2023

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) Software Maintenance includes, choose one
- a) Error corrections  
b) Enhancements of capabilities  
c) Deletion of obsolete capabilities  
d) All of the mentioned
- (ii) Which one of the following is not a maintenance model, choose one
- a) Waterfall model  
b) Reuse-oriented mode  
c) Iterative enhancement model  
d) Quick fix model
- (iii) CMM compile stands for
- a) Capability Management Module  
b) Conservative Maturity Model  
c) Capability Maturity Module  
d) Capacity Maturity Model
- (iv) According to ISO 9001, the causes of nonconforming product should be, compiled
- a) Deleted  
b) eliminated  
c) identified  
d) eliminated and identified
- (v) MTTF and MTBF are used in test
- a) Testing Metrics  
b) Process Metrics  
c) Reliability Metrics  
d) Readability Metrics
- (vi) Select the goal of the requirement analysis and specification phase of SDLC?
- a) Understanding the customer requirements and organizing them in an informal document.  
b) Analyzing the cost of the development.  
c) Determining the scope of the software.  
d) None of these
- (vii) Identify factors affect the probable consequences if a risk occur?
- a) Risk avoidance  
b) Risk monitoring  
c) Risk timing  
d) Contingency planning
- (viii) 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
- (ix) identify the first step in the software development lifecycle?  
a) System Design  
b) Coding  
c) System Testing  
d) Preliminary Investigation and Analysis
- (x) State which of the following option is not an agile method?  
a) XP  
b) 4GT  
c) AUP  
d) All of these
- (xi) Distinguish the ISO 9001 is not concerned with \_\_\_\_\_ of quality records.  
a) Collection  
b) Maintenance  
c) Verification  
d) Dis-positioning
- (xii) 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
- (xiii) From the following give three major categories of risk, 1) Schedule risk 2) Project risk 3) Technical risk 4) Business risk  
a) 1,2 and 3  
b) 2,3 and 4  
c) 1,2 and 4  
d) 1,3 and 4
- (xiv) Alpha testing done at \_\_\_\_\_  
a) Developer's site  
b) Client's site  
c) both a and b  
d) none of these
- (xv) Structural testing is known as \_\_\_\_\_ testing.  
a) Black Box  
b) Gray Box  
c) White Box  
d) None of these

### Group-B

(Short Answer Type Questions)

3 x 5=15

2. Explain alpha testing and beta testing. (3)
3. Differentiate between black box testing and white box testing. (3)
4. Briefly explain different types of software maintenance. (3)
5. Briefly state the factors of software crisis. (3)
6. What are the advantages and disadvantages of prototype model? (3)

OR

Write down several software myths. (3)

### Group-C

(Long Answer Type Questions)

5 x 6=30

7. Write short Note on : a) Spiral Model, b) V Model (5)
8. What are the advantages and disadvantages of Iterative Waterfall over RAD model? (5)
9. Discuss Reverse Engineering? (5)
10. Explain the shortcomings of LOC. (5)
11. Software does not wear out, but hardware does. Explain. (5)
12. What are the rules of drawing context level diagrams? (5)

OR

Discuss different types of maintenance with suitable example (5)

\*\*\*\*\*

*Library*  
**Brainware University**  
398, Ramkrishnapur Road, Barasat  
Kolkata, West Bengal-700125