



BRAINWARE UNIVERSITY

Term End Examination 2023-2024

Programme – MCA-2022

Course Name – Software Engineering using UML

Course Code - MCA302

(Semester III)

Brainware University
Barasat, Kolkata -700126

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) Rewrite the Full form of SRS is
- | | |
|--|---------------------------------------|
| a) Software Requirement Specification | b) Scenario Requirement Specification |
| c) Software Re-engineering Specification | d) Software Recycle Specification |
- (ii) Trace the noise in term of software development.
- | | |
|--------------------------------------|------------------------|
| a) Giving unnecessary details in SRS | b) Writing concise SRS |
| c) Specifying the requirement | d) None of these |
- (iii) Illustrate SMI
- | | |
|------------------------------|--------------------------------|
| a) Software Mature Indicator | b) Software Maturity Index |
| c) Software Mature Index | d) Software Maturity Indicator |
- (iv) Identify the testing technique , under which Bottom Up approach counts.
- | | |
|-----------------------|------------------------|
| a) Acceptance testing | b) Integration testing |
| c) Unit Testing | d) None of these |
- (v) Which of the following manuals is not a user documentation
- | | |
|---------------------|-----------------------|
| a) Beginner's Guide | b) Installation guide |
| c) Reference Guide | d) SRS |
- (vi) If an Indirect approach is taken, then the sizing approach is represented as
- | | |
|----------------|-------------|
| a) LOC | b) FP |
| c) Fuzzy Logic | d) LOC & FP |
- (vii) Classify Statement and branch coverage metrics.
- | | |
|-----------------|------------------|
| a) Testing | b) Source Code |
| c) Design Model | d) None of these |
- (viii) Programming language experience is a part of which factor of COCOMO cost drivers?
- | | |
|---------------------|-------------------|
| a) Personnel Factor | b) Product Factor |
| c) Platform Factor | d) Project Factor |
- (ix) What is the final outcome of the requirements analysis and specification phase.
- | | |
|----------------------------------|---------------------|
| a) drawing the data flow diagram | b) the SRS document |
|----------------------------------|---------------------|

- c) testing the project
d) none of these
- (x) Which selective retest technique selects every test case that causes a modified program to produce a different output than its original version?
a) Coverage
b) Minimization
c) Safe
d) Maximization
- (xi) Define UML.
a) Unified Modeling Language
b) Unified Management Language
c) Unique Modeling Language
d) United Modeling Language
- (xii) Define PERT.
a) Project Evaluation and Review Technique
b) Project Estimation and Review Technique
c) Project Equation and Review Technique
d) None of these
- (xiii) Judge the characteristics of SRS and identify the odd one.
a) Verifiable
b) Detailed View
c) Black Box View
d) Traceable
- (xiv) When testing should be stopped
a) When managers asked to stop
b) When time runs out
c) It depends upon the risk associated with the project
d) None of these
- (xv) Explain the basic tool used in structured design is
a) Structure Chart
b) ERD
c) DFD
d) CASE Tools

complete

Group-B

(Short Answer Type Questions)

3 x 5=15

2. List various object modeling using UML (3)
3. Discuss different verification techniques. (3)
4. Explain available software project estimation techniques. (3)
5. Recommend various methods of evaluating a System's Performance? (3)
6. correlate between Cohesion and Coupling. (3)

OR

What are the basic concepts of Total Quality Management (TQM)? (3)

Group-C

(Long Answer Type Questions)

5 x 6=30

7. Explain when you should use PERT charts and when you should use Gantt charts while you are performing the duties of a project manager. (5)
8. Briefly describe the different levels of CMM Model along with its key points area. (5)
9. Simulate Top-down and Bottom-up design with diagram. (5)
10. Frame the main features of ISO standards. (5)
11. Explain about Coupling and classify various types of coupling (5)
12. Identify and illustrate the content of an effective SRS document. (5)

OR

What are the key components and content typically found in an effective Software Requirements Specification (SRS) document, and how do they contribute to the successful development of a software system? (5)
