

1127

B.E. (Computer Science and Engineering)
Seventh Semester
Elective – II
CS-704A: Software Project Management

Time allowed: 3 Hours

Max. Marks: 50

NOTE: Attempt five questions in all, including Question No. 1 which is compulsory and selecting two questions from each Section.

x-x-x

Q1 Answer the following:

- | | |
|--|---|
| (i) • Compare LOC and FP metrics. Which can be used in which phase? | 2 |
| (ii) Distinguish between Forward Engineering and Reverse Engineering. | 2 |
| (iii) Differentiate between Reactive and Proactive Risk Strategies. | 2 |
| (iv) Justify the importance of Critical Path in scheduling of a project. | 2 |
| (v) Discuss the concepts of Quality control and Quality Assurance. | 2 |

SECTION- A

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|--|----|
| Q2(a) Explain W ^S HH Principle for software project management. | 5 |
| Q2(b) Illustrate various Object-Oriented Metrics using suitable examples. | 5 |
| Q3. Demonstrate and compare various software project estimation techniques using real life scenarios. | 10 |
| Q4. (a) Compare Tracking progress for an OO project with that for conventional software using suitable examples. | 5 |
| Q4 (b) Discuss project scheduling for WebApp and Mobile projects using a case study. | 5 |

SECTION- B

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|--|----|
| Q5 (a) Discuss various levels of CMM model along with their associated Key Process Areas. | 5 |
| Q5 (b) Demonstrate Software Quality Assurance (SQA) plan using suitable example. | 5 |
| Q6 Build RMMM Plan for a real time system using a real life scenario. | 10 |
| Q7 Explain Software Reengineering and its various phases using a case study. Also discuss its economics aspects. | 10 |

x-x-x

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Roll No.

as : 7

Sub. Code :

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Exam. Code :

9	1	9
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B.Engg. Computer Science & Engg. 7th Semester

1124

SOFTWARE TESTING AND QUALITY ASSURANCE

Paper – CSE-713

Time Allowed : Three Hours]

[Maximum Marks : 50

Note :— First question is compulsory. Attempt at least two questions each from Sections II and III.

SECTION—I

1.
 - (i) Mention some of the drawbacks of RAD model.
 - (ii) Brute force debugging method is least efficient. Justify.
 - (iii) Write any three concerns in Client/server testing.
 - (iv) What is cost of quality?
 - (v) Exhaustive testing is not possible. Why?
 - (vi) What is the importance of version control in SCM?
 - (vii) What are the four p's focused on effective software project management?
 - (viii) Define Verification and Validation.
 - (ix) What is RMMM plan?
 - (x) What are the management responsibilities regarding ISO 9001 requirements?
10×1=10

SECTION—II

2. What do you mean by software crisis ? Illustrate with the help of diagram that software does not wear out.

6822/BDF-24650

[Turn over

- VII.
 - a) Explain any code generation algorithm with example
 - b) Define basic blocks, flow graphs and then explain ho optimization.

Explain Functional point approach in software size estimation. Why this approach is better than LOC in software size estimation.

3. Explain why software inspection is an effective technique for improving the quality. Discuss various guidelines for carrying out software inspection.
How SPICE encourages continuous improvement of the software process ?

5,5

4. Explain Requirements Engineering Process Functions. Discuss RMMM-plan for on-line banking system.

Write short notes on :

- (i) Configuration Management
- (ii) Key process areas of Capability Maturity Model(CMM).

5,5

SECTION—III

5. What is control flow graph? How is it used in white box testing? How is the cyclomatic complexity value useful to the tester?
Write short notes on Fault based Testing and Scenario based Testing.

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6. Explain Equivalence Class Partitioning and Boundary value analysis. Compare the two. Discuss various strategies of debugging with relative merits and demerits.

5,5

7. Draw and discuss workbench diagram in a multiplatform system. Discuss various concerns and appropriate controls in case of multiplatform system.

Explain do and check procedures in testing web based system. Also discuss various risks and controls in a web based system.

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Printed Pages : 2

Roll No.

Questions : 7

Sub. Code :

6	8	2	3
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Exam. Code :

9	1	9
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B.Engg. (Computer Science & Engg.) 7th Semester
1125

SOFTWARE TESTING & QUALITY ASSURANCE

Paper-CSE-713

Time Allowed : Three Hours]

[Maximum Marks : 50

Note :- Question No. 1 Section-A is compulsory. Attempt any **two** questions from Section B and any **two** questions from Section C.

SECTION-A

1. (i) Distinguish between Verification and Validation. 1
- (ii) Define software reliability. 1
- (iii) Define software risk. 1
- (iv) Differentiate between Alpha and Beta testing. 1
- (v) What is stress testing ? 1
- (vi) What is loop testing ? 1
- (vii) Briefly describe Equivalence Partitioning. 1
- (viii) What is Boundary Value Analysis ? 1
- (ix) Describe Testing Security. 1
- (x) How to compute cyclomatic complexity ? 1

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[Turn over

VII. a) Explain any code generation algorithm with example.
blocks, flow graphs and then explain how

SECTION-B

2. (a) Distinguish between LOC and Function Point approach software size estimation. 5
(b) What are metrics ? Discuss metrics used for measurement of software quality. 5
3. (a) Explain ISO 9126 Quality Factors. 5
(b) Discuss key process areas of CMM model. 5
4. (a) Explain the RMMM Plan in detail. 5
(b) Discuss various SCM processes. 5

SECTION-C

5. Explain various Black Box and White Box Testing techniques. 10
6. (a) How to conduct testing of off-the-Shelf Software ? 5
(b) Explain testing of Real Time Systems. 5
7. Write short notes on :
 - (i) Alpha and beta testing
 - (ii) System testing
 - (iii) Recovery testing
 - (iv) Security testing
 - (v) Stress testing.5×2=10