

(i) Printed Pages : 3

Roll No.

(ii) Questions : 9

Sub. Code :

3	1	3	9
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Exam. Code :

4	6	1
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M.Sc. IT 3rd Semester

1125

INFORMATION TECHNOLOGY

Paper - MS-51 : Software Testing and Management

Time Allowed : Three Hours]

[Maximum Marks : 80

Note :- Attempt **five** questions in all including Q. 9 in Section E, which is compulsory and taking **one** question each from Section A to Section D.

SECTION-A

1. (a) Discuss Software Testing Process. What are the objectives of Software Testing ? 8
(b) Discuss the architecture and elements of STEP methodology. 8
2. (a) Discuss McCabe's Cyclomatic Complexity metric with the help of an example. 8
(b) Discuss the importance of metrics to Software Project. How can you categorize various metrics ? 8

SECTION-B

3. (a) Discuss the characteristics of Software Testing Strategies. 4
- (b) Discuss Domain and Boundary Testing techniques with the help of examples. 6
- (c) What is Six Sigma ? How to apply six sigma in software engineering ? 6
4. (a) Differentiate between Black Box Testing and White Box Testing. Discuss Data Flow Testing in detail. 8
- (b) Discuss the following :
- (i) Formal Technical Reviews
- (ii) Alpha and Beta Testing. 8

SECTION-C

5. (a) What do you understand by Software Quality Assurance ? Discuss various components of Software Quality Assurance Plan. 8
- (b) What are the various attributes of Software Quality ? Discuss various factors that affect the quality of a software. 8
6. (a) What is the importance of ISO 9000 standard for Software Industry ? Discuss the requirements of ISO 9001 Certification. 8
- (b) Discuss SEI CMM in detail. 8

SECTION-D

7. (a) What is Software Reliability ? How to measure it ? Discuss various Software Reliability merits. 8
- (b) How Configuration management is planned ? Discuss Configuration Item Identification and Configuration Database in detail. 8
8. (a) Discuss Change Management in detail. 8
- (b) What are Software Risks ? How to identify, project and refine risks ? 8

SECTION-E

9. (a) What do you understand by Dynamic Analysis ? 3
- (b) Differentiate between Quality Assurance, Quality Planning and Quality Control. 3
- (c) What is SPICE ? 2
- (d) What do you understand by product metrics ? 2
- (e) What do you understand by Test Case ? 2
- (f) What do you understand by Release Management ? 2
- (g) What is RMMM plan ? 2