

(i) Printed Pages : 3 Roll No.

(ii) Questions : 9 Sub. Code :

2	6	0	3	5
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Exam. Code :

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**M.Sc. Information Technology 1st Semester
(2124)**

SOFTWARE ENGINEERING

Paper : MS-61

Time Allowed : Three Hours] [Maximum Marks : 80

Note :— The students are required to attempt **one** question from each Unit and the entire compulsory question (Unit I).

UNIT—I

1. All parts are compulsory :

- (i) Enlist characteristics of SRS.
- (ii) Write goals of Software engineering.
- (iii) Define ER Diagrams.
- (iv) Define Work breakdown bench.
- (v) Define Beta and Alpha testing.
- (vi) Define Software Reliability Metrics.
- (vii) Explain Basic path testing.
- (viii) What are software testing strategies ?

2×8=16

UNIT—II

2. (a) Write the Principles Structured Analysis. Explain Data Dictionary.

8

- (b) What is software process model ? Explain the need of software process model. With help of diagram, explain Spiral model. 8
3. (a) What is SRS ? Explain the structure of SRS. 8
- (b) Write short notes on the following :
- (i) RAD
- (ii) Agile Modelling. 8

UNIT—III

4. (a) Explain UI design along with its elements and its characteristics. 8
- (b) What do you mean by the terms cohesion and coupling in the context of software engineering ? How are these concepts useful in arriving at a good design of a system ? 8
5. (a) With the help of examples explain GANTT Chart and PERT Chart. 8
- (b) Explain Constructive Cost Model in detail. 8

UNIT—IV

6. (a) Why Software Metrics are important ? Explain their role in software development process and comment in brief on different types of software metrics. 8
- (b) Differentiate between LOC and FP. 8

7. (a) Explain what system maintenance is. Explain different types of system maintenance. 8
- (b) What is Software Reliability ? Differentiate between Hardware and Software Reliability. 8

UNIT—V

8. (a) What do you mean by Object Oriented Testing ? Differentiate between OO testing and Traditional Testing. 8
- (b) What is White Box testing ? Explain basic path testing and Structural testing techniques. 8
9. (a) What are objectives of Software Testing ? Explain Software Testing Process. 8
- (b) Explain the following :
- (i) Functional testing.
 - (ii) Integration testing.
 - (iii) Unit testing.
 - (iv) Debugging. 8