

(i) Printed Pages : 3

Roll No.

(ii) Questions : 9

Sub. Code :

3	1	2	6
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Exam. Code :

4	5	9
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M.Sc. IT 1st Semester

1125

INFORMATION TECHNOLOGY

Paper-MS-40 : Software Engineering

Time Allowed : Three Hours]

[Maximum Marks : 80

Note : Attempt **five** questions in all, selecting **one** question each from Sections A, B, C and D. Section E is compulsory.

SECTION-A

1. (a) Define Software Engineering. What are the goals of Software Engineering ? 6
(b) What is SRS ? Discuss characteristics and components of an SRS. 10
2. (a) What do you understand by Software Process Model ? Differentiate between various Software Process Models. 10
(b) What are the role and skills of a Software Engineer ? 6

SECTION-B

3. (a) Differentiate between DFDs and ER Diagrams with the help of suitable examples. 6
(b) Discuss Object Oriented Metrics in detail. 10

4. (a) Discuss Size oriented and Function oriented metrics. 8
- (b) Discuss the role of metrics and measurements in Software Development. 8

SECTION-C

5. (a) Discuss COCOMO model in detail. How is it different from COCOMO-II ? 8
- (b) Discuss Software Design Principles. How Structured Design is different from Modular Design ? 8
6. (a) What do you understand by Software Risk ? How software risks are assessed ? 6
- (b) Discuss the objectives of Software Project Planning. 6
- (c) Differentiate between Cohesion and Coupling. 4

SECTION-D

7. (a) What is the role of Software Maintenance in Software Development Life Cycle ? Discuss various types of Software Maintenance. 8
- (b) Discuss Vendor Selection and Software Selection. 8
8. (a) Discuss User Manual and Documentation in detail. 8
- (b) Discuss Hardware Selection and Acquisition in detail. 8

SECTION-E

9. (a) What do you understand by Agile Models ? 2
- (b) Give important characteristics of Spiral Process Model. 2

- (c) What is Data Dictionary? 2
- (d) Give important characteristics of GUI. 2
- (e) What do you understand by site preparation? 2
- (f) Differentiate between validation and verification. 2
- (g) What do you understand by Benchmarking? 2
- (h) What do you understand by Software Quality? 2