(i) **Printed Pages : 2**   **Roll No.** ....

(ii) **Questions   : 9**   **Sub. Code :** [3] [6] [0] [7]

                                   Exam. Code : [0] [4] [5] [9]

M.Sc. Information Technology 1st Semester
1128
SOFTWARE ENGINEERING
Paper—MS-61

Time Allowed : Three Hours]   **[Maximum Marks : 80**

Note :—Attempt *five* questions in all, selecting one question each from Units-I, II, III and IV. Unit-V is compulsory.

UNIT—I

1. (a) What are the characteristics of a well-engineered software ?   8

   (b) When is the Spiral model an appropriate software life cycle model to use ? What aspects does a Spiral model address ?   8

2. (a) What is an SRS ? Give an example SRS and explain the components.   8

   (b) What is a DFD ? Design DFD(s) for a Hotel management system. Take suitable assumptions.   8

UNIT—II

3. (a) What is Modular design ? Explain important concepts of modular design.   8

   (b) Give the elements and important characteristics of User interface design.   8

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4. (a) How to plan and schedule a project using PERT chart ? Give example. 8

(b) What is Software risk ? How to assess software risk ? 8

UNIT—III

5. (a) What is the use of software metrics ? Differentiate between project, product, process and people metrics. 8

(b) Discuss various software size metrics with the help of suitable examples. 8

6. (a) What is Software maintenance ? Why is it important ? What are different types of software maintenances. 8

(b) Differentiate between Software reliability and Hardware reliability. Discuss different Software Reliability metrics. 8

UNIT—IV

7. (a) Discuss the process of Software testing. What are the objectives of software testing ? 10

(b) Discuss Boundary value analysis with the help of example(s). 6

8. (a) Discuss integration and functional testing with the help of suitable example(s). 10

(b) Explain difference between Alpha and Beta testing. 6

UNIT—V

9. (a) What do you understand by Agile modeling ? 2

(b) What is E-R diagram ? Give example. 2

(c) How structure-chart is different from flow-chart ? 2

(d) Give two important characteristics of Black box testing. 2

(e) Give two factors which affect the reliability of a Software. 2

(f) Give two characteristics of Prototyping model. 2

(g) Give an example Cause-effect graph. 2

(h) What do you understand by equivalence classes ? 2