

(i) Printed Pages : 3

Roll No. ....

(ii) Questions : 9

Sub. Code : 

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| 0 | 4 | 5 | 9 |
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M.Sc. Information Technology 1<sup>st</sup> Semester  
(2122)

**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) Give characteristics of a well-engineered software. 8  
(b) What are software requirements ? How to document it ? 8
2. (a) What are DFDs ? How to design DFDs for a system ? Give example. 8  
(b) What do you understand by Agile Modelling ? Explain in detail. 8

**UNIT—II**

3. (a) Discuss User Interface design and its elements. 8

- (b) Discuss Critical Path Method with the help of an example. 8
4. (a) What do you understand by Modular design ? Explain in detail. 8
- (b) Discuss COCOMO model for cost estimation. 8

### UNIT—III

5. (a) What is the role of metrics and measurements in Software development ? 8
- (b) What do you understand by Software Maintenance ? What are its types ? Give examples. 8
6. (a) Discuss Software size metrics with the help of suitable examples. 8
- (b) How software reliability is different from hardware reliability ? What are Software reliability metrics ? 8

### UNIT—IV

7. (a) What are the objectives of Software testing ? Discuss Black box and White box testing. 8
- (b) What do you understand by Unit and Integration testing ? Explain. 8
8. (a) Discuss equivalence class testing with the help of an example. 8
- (b) Discuss object oriented testing with the help of example(s). 8

## UNIT—V

9. (a) Give two characteristics of waterfall model. 2
- (b) Give four characteristics of SRS. 2
- (c) What is the use of GANTT chart ? 2
- (d) What do you understand by Coupling ? Give example. 2
- (e) What are people metrics ? 2
- (f) Give two factors that affect reliability of a system. 2
- (g) What is functional testing ? 2
- (h) What do you understand by alpha testing ? 2