2012
M.Sc. Information Technology
First Semester
MS-61: Software Engineering

Time allowed: 3 Hours   Max. Marks: 80

NOTE: *Attempt* *five* *questions in all, including Question No.* 9 *(Unit-V) which is compulsory and selecting one question each from Unit I - IV.*

x-x-x

UNIT-I

1) a) What are the characteristics of software which are different from hardware? Give characteristics of a well-engineered software.   (8)

b) What is the need of a Software Development Process? What are the shortcomings of classical waterfall model?   (8)

2) a) What are the characteristics of a good SRS document? Who are the users of SRS document?   (8)

b) What do you understand by Structured Analysis? What are the underlying principles of Structured Analysis? Explain with the help of an example.   (8)

UNIT-II

3) a) What are the quality guidelines for Software Design?   (8)
b) Discuss about Object-oriented Design with the help of an example.   (8)

4) a) Discuss Pert Chart with the help of example. Discuss its advantages.   (8)
b) How to assess a risk and mitigate it?   (8)

UNIT-III

5) a) Discuss function-based metrics with the help of an example.   (8)
b) Discuss the role of metrics and measurement in software development.   (8)

6) a) What are the characteristics and types of Software Maintenance?   (8)
b) What do you understand by Software Reliability? How is it different from Hardware Reliability? (8)

UNIT-IV

7) a) Discuss Boundary Value Analysis and Equivalence Class Partitioning techniques with the help of examples.   (10)
b) What are the main activities performed during testing?   (6)

8) a) Discuss Scenario based testing in Object Oriented Software.   (8)
b) Discuss various approaches to integration testing with suitable examples.   (8)

P.T.O.

UNIT-V

9) a) What is RAD? (2)

b) What is data dictionary? Give example. (2)

c) What is the use of Critical Path Method? (2)

d) What is LOC metric? Give example. (2)

e) Give two attributes of effective software metric. (2)

f) What do you understand by People metrics? (2)

g) What is Black Box testing? (2)

h) What do you understand by a test case? Give example. (2)

x-x-x