

2012
MCA
5th SEMESTER EXAMINATION
SOFTWARE ENGINEERING
PAPER—3502

Full Marks : 100

Time : 3 Hours

The figures in the margin indicate full marks.

Candidates are required to give their answers in their own words as far as practicable.

Illustrate the answers wherever necessary.

Answer Q. No. 1 and any four from the rest.

1. (a) What is DFD? What do you understand by factoring DFD or exploring DFD? How DFD can be balanced? 2+2+3
(b) Draw a DFD alongwith with context diagram of a 'Online Railway Reservation System'. (State any assumption made) 2+5
2. (a) Software Engineering can be viewed as a layered technology. Explain. 4
(b) What is process model? Why it is important? Outline the major steps involved in the spiral model. 2+3+5
3. (a) The COCOMO model is based on the hierarchy of three models, namely basic model, intermediate and complete or advance model. Explain them. 3×3

- (b) What do you understand by software configuration? Mention the activities involved in Software Configuration Management. 1+4
4. (a) What is 'Risk'? Is it economical to do risk management? Explain the three categories of risks that a software project might suffer from. 2+2+6
- (b) What is Software Maintenance? Why is it needed? 2+2
5. (a) What do you mean by the term 'Requirement'? Explain the process of determining the requirements for a software based system. 1+6
- (b) Write a short notes on :
- (i) Components of SRS ;
- (ii) Characteristics of SRS. 3+4
6. (a) What is Cohesion and Coupling? 4
- (b) 'A good design must have high cohesion and low coupling'. Justify. 5
- (c) Discuss the various type of coupling. 5
7. (a) What is testing? How the terms 'Failure, Test suite and Test case' relates with 'Testing'. 5
- (b) Is it beneficial to allow user to test a software before finally accepting it? If yes, why? Explain the testing through which the user tests a software? 3+3
- (c) When does the coding phase begins? What are its objectives? 1+2
8. (a) Explain the basic features of a software design?
- (b) Explain White box testing and Black box testing. Discuss how these modules can be used together for testing a program module? 6+(4+4)

Internal Assessment

30