Total No. of printed pages = 3

Co-603/SE/6th Sem/2014/N

SOFTWARE ENGINEERING

Full Marks – 70

Pass Marks – 28

Time – Three hours

The figures in the margin indicate full marks for the questions.

Answer question No.1 and any *four* from the rest.

1. Answer the following short questions : 5×2=10

   (a) Define the term software reliability.

   (b) What do you understand by software crisis ?

   (c) Define meta model.

   (d) What is risk ?

   (e) Define unit testing.

2. (a) Explain classical waterfall model and show its disadvantages. 5+3=8

   (b) Explain prototype model and specify when it is more suitable. 5+2=7

[Turn over

3. (a) Define the following terms : 3×2=6

(i) Verification

(ii) Validation

(iii) SRS document.

(b) Identify the software quality factors and explain them briefly. 6

(c) Illustrate the Jelinski and Moranda model for reliability. 3

4. (a) Compare function oriented and object oriented design. 5

(b) Compare cohesion and coupling. 4

(c) What is DFD ? List the symbols used in a DFD. 4

(d) What is a context diagram ? 2

5. (a) Explain the following reliability metrics : 10

(i) ROCOF

(ii) MTTF

(iii) MTTR

(iv) MTBF

(b) Write down the characteristics of a good SRS document. 5

6. (a) Compare black box and white box testing. 4

(b) Give one method for both black box and white box testing. 6

(c) Compare integration testing and system testing. 5

7. Write short notes on any *three* : 3×5=15

(a) Activities of SQA

(b) Basic COCOMO model for project estimation

(c) PERT chart

(d) GANTT chart.