b) Differentiate between: 4

i) Error, Bug & Faliure

ii) Mistake & Fault

8. Compare and contrast between Black Box and White Box testing with proper examples. 14

UNIT - V

9. a) Why do systems fail? What are the different types of failures? 2+3=5

b) Compare between software and hardware reliability. Draw Bath-Tub curves to explain with an examples. 4+5=9

10. a) What is SQA? What are the various metrics used to measure Software Reliability? Explain. 1+8=9

b) What are the benefits and shortcomings of ISO certifications? Compare and contrast them. 5

PG / INTEGRATED (CBCS) ODD SEMESTER EXAMINATION, 2021

Held in April 2022

COMPUTER SCIENCE

9th Semester / 3rd Semester

COURSE NO. MCSCC - 901 / MS - 301

(Software Engineering)

Full Marks : 70
Pass Marks : 28

Time : 3 hours

The figures in the margin indicate full marks for the questions

(Answer any five questions, taking one from each unit)

UNIT-I

1. a) State whether the following statements are true or false. Give reasons behind your answers. 5x2=10

i) For a well-understood data processing application we have to use spiral model.

ii) Selecting the appropriate Life Cycle Model for a project is not important as spiral model can be employed to solve all problems.

b) What are the advantages and disadvantages of using the RAD model? 4

2. a) What are software myths? Explain 3 of them. 6

   b) What are the short comings of classical waterfall model? 2

   c) Draw and explain the spiral model with an example. 6

UNIT - II

3. a) What are the different categories of software development projects according to the COCOMO estimation model? Give examples of software product development models belonging to each of these categories. 12

   b) In SDLC when does project management activities start? When do they end? 2

4. State if the following are TRUE or FALSE with justifications. 7x2=14

   i) COCOMO estimation technique takes care of cost, risk, effort, size

   ii) COCOMO states that size of the software is most fundamental attribute next only to effort.

   iii) Risk Generation is not a risk management activity.

   iv) Risk management activities are divided in two parts.

   v) SCM is the same as Software Configuration Activity.

   vi) Todays Risk are Tomorrows Problem.

   vii) KLOC is related with both RISK management and configuration management.

UNIT - III

5. a) What is Pseudocode? Write a Pseudocode to explain a library automation system. 2+8=10

   b) Explain module cohesion and coupling with an example. 4

6. a) What are the objectives of design? What do you mean by conceptual and technical design? 2+3=5

   b) Write notes on with proper examples.: 3x3=9
   a) Bottom up design
   b) Top down design
   c) Hybrid design

UNIT - IV

7. a) Write notes on: 5+5=10
   i) UNIT Testing
   ii) System Testing