2017/EVEN/08/24/MCS–801 (C)/ MS–201 (C)/CS–801 (O)/569

PG Even Semester (CBCS) Exam., May—2017

COMPUTER SCIENCE

(8th Semester/2nd Semester)

Course No. : MCS–801 (C)/MS–201 (C)/CS–801 (O)

(Software Engineering)

Full Marks : 75

Pass Marks : 30 (CBCS) / 26 (Old/Non-CBCS)

Time : 3 hours

The figures in the margin indicate full marks for the questions

Answer **five** questions, selecting **one** from each Unit

UNIT—I

1. *(a)* What are the characteristics of S/W? 5

(b) Draw and explain the spiral model of SDLC. 10

2. *(a)* Define the following : 1+2+3=6

(i) Deliverables and milestones

(ii) Product and process

(iii) Measures, metrics and measurements

(b) What are the advantages and disadvantages of waterfall model? 4

(c) Explain why we use prototyping model. How is it better than waterfall model? 5

UNIT—II

3. *(a)* Draw the diagram of CASE environment and explain it. 10

(b) Explain any one of the requirement elicitation methods. 5

4. *(a)* With proper diagram, explain 'risk management'. 10

(b) List the general organization of SRS. 5

UNIT—III

5. *(a)* What are the characteristics that serve as a guide for the evolution of a good design? 3

(b) What are the desirable properties of a modular system? 5

(c) What do you mean by transform and transaction flow in design? Explain. 7

6. *(a)* Explain the concepts of module coupling and cohesion. Name the different types of coupling and cohesion. 8

(b) Explain the concept of object-oriented design. 7

UNIT—IV

7. *(a)* Define the following : 6

(i) Error

(ii) Failure

(iii) Test case

(iv) Test suite

(v) Verification

(vi) Validation

(b) Explain the concept of unit testing. 6

(c) Why do we need test cases? Explain. 3

8. Write notes on white and black box testing. 7½+7½=15

UNIT—V

9. *(a)* What is SCM? What is the necessity of SCM? What are the configuration management activities? 2+2+3=7

(b) What are reliability metrices? Name them. 2+2=4

(c) What are the different types of failures? Name them. 2+2=4

10. *(a)* What is ISO 9000 certification? Why is it important to get this certification? What are the steps/stages needed to obtain ISO 9000 certification? 3+4+5=12

(b) What is SEI capability maturity model? 3

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