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CSE 1816 OE 11

10/8/22

Roll No. of candidate

2022

B.Tech. 6th Semester End-Term Examination

Computer Science and Engineering

SOFTWARE ENGINEERING

(New Regulation & New Syllabus)

Full Marks – 70   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 questions :   (10 × 1 = 10)

    (i) What is the first step in the software development lifecycle?

       (a) System Design

       (b) Coding

       (c) System Testing

       (d) Preliminary Investigation and Analysis

    (ii) What is the major drawback of the Spiral Model?

       (a) Higher amount of risk analysis

       (b) Doesn't work well for smaller projects

       (c) Additional flinctionalitjes are added later on

       (d) Strong approval and documentation control

    (iii) Software maintenance costs are expensive in contrast to software development.

       (a) True   (b) False

    (iv) What is Software Engineering?

       (a) Designing a software

       (b) Testing a software

       (c) Application of engineering principles to the design a software

       (d) None of the above

[Turn over

(v) What is a Functional Requirement?

    (a) Specifies the tasks the program must complete

    (b) Specifies the tasks the program should not complete

    (c) Specifies the tasks the program must not work

    (d) All of the above

(vi) What is the full form of the "COCOMO" model?

    (a) Cost Constructive Estimation Model

    (b) Constructive Cost Estimation Model

    (c) Constructive Case Estimation Model

    (d) Constructive Cost Estimating Model

(vii) Which of the following document contains the user system requirements?

    (a) SRD   (b) DDD

    (c) SDD   (d) SRS

(viii) The relationship between a derived class and base class is referred to as

    (a) Association   (b) Inheritance

    (c) Instantiation   (d) Polymorphism

(ix) Waterfall model is not suitable for:

    (a) Small project   (b) Complex project

    (c) Acconinodating changes   (d) None of the above

(x) Why is Requirements Elicitation a difficult task?

    (a) Problem of scope   (b) Problem of understandability

    (c) Problem of volatility   (d) All of the above

2. (a) What is software engineering? Describe the importance of software Engineering.

                                                  (4 + 6=10)

   (b) Describe briefly about software standards.   (5)

3. (a) What do you mean by software development life-cycle (SDLC)? What are the different stages of a SDLC? Discuss briefly about the Spiral model.

                                                  (2 + 2 + 5=9)

   (b) What I do you mean by requirements specification? Briefly explain about the different approaches followed for requirements specification.   (2+4=6)

4. (a) What is a data flow diagram? What are the purposes of using Data Flow diagrams? Give an example with suitable diagrams. (2+2+5=9)

   (b) What is the difference between SRS document and design document? What are the contents we should include in the SRS document and design document. (2+4=6)

5. (a) List and explain different types of testing done during the testing phase. (2+8=10)

   (b) What is a class and object? Give the diagrams and representation of class and object. (2+3=5)

6. (a) What do you mean by cost estimation in project management? Explain briefly about COCOMO model. (3+7=10)

   (b) What is data modeling? What do you mean by cardinality in data modeling? (3+2=5)

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

   (a) Generalization

   (b) Evolutionary model

   (c) Software metric

   (d) Coupling and Cohesion

   (e) ER diagram