BACHELOR OF COMPUTER APPLICATION
Third Semester
SOFTWARE ENGINEERING
(BCA - 12)

Duration: 3Hrs.   **Full Marks: 70**

Part-A (Objective) =20
Part-B (Descriptive) =50

(PART-B: Descriptive)

Duration: 2 hrs. 40 mins.   **Marks: 50**

Answer any *five* of the following questions:

1. What is software? Explain the characteristics and applications of software.

    (2+8=10)

2. What is Software Process Model? What are the activities of process framework? Explain the Spiral model.   (2+3+5=10)

3. What are the three major categories of software engineering resources, explain with a neat diagram? What are the objectives of Requirement analyses? (5+5=10)

4. What is software design process? Explain different frameworks for fundamental software design concept. Explain user interface design process.   (2+5+3=10)

5. What is software quality? Explain different elements of software quality assurance.

    (3+7=10)

6. Explain how Software testing strategy may also be viewed in the context of the Spiral with a neat diagram.   (10)

7. What is software reuse? What is Case and Case tools? Explain components and types of Case tools.   (2+2+6=10)

8. Explain the following terms: (2.5×4=10)

    a) Direct measures and indirect measures of software.

    b) Data Objects, Data Attributes and Relationships.

    c) White and Black Box Testing.

    d) Reliability and Testability of software.

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Duration: 20 minutes   **Marks – 20**

(PART A - Objective Type)

I. Choose the correct answer: **1×20=20**

1. What is the goal of the requirement analysis and specification phase of software development life cycle?
   [A] Understanding the customer requirement and organize them in an informal document.
   [B] Analysing the cost of development.
   [C] Determining scope of the software.
   [D] None of the above.

2. What is the final outcome of the requirement analysis and specification phase?
   [A] Drawing the DFD   [B] The SRS document
   [C] Design and Coding   [D] The user manual

3. An ER diagram depicts
   [A] Entities   [B] Keys
   [C] Relationships   [D] All of the above

4. The database design activity deals with the design of the
   [A] Logical Database   [B] Physical Database
   [C] Both [A] & [B]   [D] Only [B]

5. Testing can be applied to
   [A] Requirements   [B] Analysis
   [C] Design   [D] Code

6. Which one of the following testing is performed by user?
   [A] Acceptance Testing   [B] Unit testing
   [C] Compatibility Testing   [D] None of these

7. The CASE tools are used for
   [A] System requirement analysis   [B] System designing
   [C] I/O design   [D] None of the above

8. The CASE repository
   [A]Works as storage   [B] Provide valuable information to project manager
   [C] Both [A] & [B]   [D] Only [B]

9. Central repository of CASE tools also serves as data dictionary.
   [A] True   [B] False

10. If a direct approach to software project sizing is taken, size can be measured in terms of
    [A] LOC (Line of code)   [B] FP (Function Point)
    [C] LOC & FP   [D] None of the mentioned

11. If an indirect approach is taken, then the sizing approach is represented as
    [A] LOC (Line of code)   [B] FP (Function Point)
    [C] Fuzzy Logic   [D] LOC & FP

12. The _____ defines quality of software in terms of the original specification of the product.
    [A] User view   [B] Product view
    [C] Value-based view   [D] Manufacturer's view

13. MTTF stands for
    [A] Minimum time to failure   [B] Mean time to failure
    [C] Maximum time to failure   [D] All of the above

14. The foundation for software engineering is the _____ layer.
    [A] Tools   [B] Methods
    [C] Process   [D] Quality Focus

15. Which of the following is not a product matrix?
    [A] Size   [B] Reliability
    [C] Functionality   [D] Productivity

16. SDLC stands for
    [A] Software design life cycle   [B] Software development life cycle
    [C] System design life cycle   [D] System development life cycle

17. Which of the following is not the characteristic of software?
    [A] Software does not wear out   [B] Software is flexible
    [C] Software is not manufactured   [D] Software is always correct

18. Management of software development is depending upon?
    [A] People   [B] Product
    [C] Process   [D] All of the Above

19. During software development which factor is most crucial?
    [A] People   [B] Product
    [C] Process   [D] Project

20. Project risk factor is considered in?
    [A] Waterfall model   [B] Spiral model
    [C] Prototyping model   [D] Iterative enhancement model

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