BCA(Sem-IV) —
Software Engg.
(402)

2023

(Session : 2021-24)

Time : 3 hours

Full Marks : 70

Candidates are required to give their answers in their own words as far as practicable.

The figures in the margin indicate full marks.

Answer from all the Sections as directed.

Section – A

(Objective Type Questions)

1. Choose the correct answer of the following :

$$2 \times 10 = 20$$

(a) What is the primary goal of software engineering ?

(i) Building software quickly

(Turn over)

(ii) Building high-quality software easily

(iii) Writing as much code as possible

(iv) Maximizing software complexity

(b) What is the purpose of requirement engineering ?

   (i) To design the user interface

   (ii) To gather and document user needs and system requirements

   (iii) To implement the software

   (iv) To test the software for defects

(c) What does the term "SDLC" stands for ?

   (i) Software Development Learning Cycle

   (ii) System Design and Life Cycle

   (iii) Software Development Life Cycle

   (iv) Systematic Development of Large Code

(d) Which software development model is known for its iterative and incremental approach ?

    (i) Waterfull model

    (ii) Agile model

    (iii) Spiral model

    (iv) V-model

(e) What is the purpose of the "testing" phase in SDLC ?

    (i) To gather requirements

    (ii) To design the system

    (iii) To identify and fix defects in the software

    (iv) To deplay the software to users

(f) What is the purpose of a software prototype ?

    (i) To serve as the final version of the software

    (ii) To simulate only the user interface

(iii) To demonstrate the feasibility of a concept or design

(iv) To generate test cases

(g) What is the definition of Software Engineering ?

(i) The art and science of creating software

(ii) The application of engineering principles to the design, development and support of software

(iii) The process of writing code

(iv) The study of computer programming

(h) What are the two main phases of SDLC ?

(i) Planning and design ; implementation and testing

(ii) Requirement analysis ; design and implementation

(iii) Coding ; testing and deployment

(iv) Design ; development and testing

(i) What is the purpose of 'White-Box' testing ?

    (i) To test the functionality of the software

    (ii) To test the internal structure of the software

    (iii) To test the user interface of the software

    (iv) To test the performance of the software

(j) What are the three main types of software quality ?

    (i) Functionality, usability and reliability

    (ii) Performance, maintainability and portability

    (iii) Security, safety and privacy

    (iv) All of these

Section – B

(Short-answer Type Questions)

Answer any **four** questions of the following :

$$5 \times 4 = 20$$

2. What is CMMI maturity levels ?

3. What do you mean by COCOMO ?

4. Define Software Engineering.

5. What is project estimation ?

6. Define feasibility study.

7. What are the functional and non-functional requirements ?

8. Differentiate between Cohesion and Coupling.

Section – C

(Long-answer Type Questions)

Answer any **two** questions of the following :

$$15 \times 2 = 30$$

9. What is SRS ? Why is it needed ? What are its characteristics and components ?

10. What is waterfall model ? Explain each step of a waterfall model in detail.

11. What is RMMM ? Explain in detail.

12. Define and differentiate Increment, Iterative and Agile methodology

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