

Roll No. ....

**97676**

**BCA 3 Years 4th Semester  
Examination – May, 2025**

**SOFTWARE ENGINEERING**

**Paper : BCA-209**

*Time : Three Hours ]*

*[ Maximum Marks : 80*

*Before answering the questions, candidates should ensure that they have been supplied the correct and complete question paper. No complaint in this regard, will be entertained after examination.*

**Note :** Attempt *five* questions in all, selecting *one* question from each Unit. Question No. 1 is *compulsory*. All questions carry equal marks.

1. Answer the following questions in short :  $2 \times 8 = 16$

(a) What is DFD ?

(b) What is requirement elicitation ?

(c) What is software project planning ?

(d) What is Project Evaluation Review Technique (PERT) ?

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(e) Define Halstead's Software Science metrics.

(f) What is object-oriented design ?

(g) What is unit testing ?

(h) What is software documentation ?

**UNIT – I**

2. (a) What is software engineering ? Explain the need of software engineering in software development. 8

(b) What is waterfall lifecycle model ? Explain its working. What are the various limitations of waterfall model ? 8

3. (a) What do you mean by requirement engineering ? Discuss the various activities of requirement engineering. 8

(b) What is SRS ? Explain the organization of good SRS documentation. 8

**UNIT – II**

4. (a) What is project monitoring ? What are the different methods of project monitoring ? 8

(b) What is risk management ? How it is helpful in making successful project ? 8

5. (a) Explain COCOMO model for cost estimation. What are the limitations of COCOMO model ? 8

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(b) Write short notes on : 2 × 4 = 8

- (i) Lines of Code
- (ii) Function Count

**UNIT – III**

6. (a) Explain the concepts of coupling and cohesion in software design. Why are they important? 8
- (b) What is function oriented design ? Describe the major activities involved in function-oriented design. 8
7. (a) What do you mean by software metrics ? Explain the concept of token count metric. 8
- (b) What is the significance of coding in software development life cycle ? What are the major concepts that help to make a program more readable ? 8

**UNIT – IV**

8. (a) What is structural testing ? Explain various techniques of structural testing. 8
- (b) What is integration testing ? Explain different types of integration testing. 8

9. (a) Describe various types of software maintenance. What are the various problems and costs associated with software maintenance ? 8
- (b) What is reverse engineering ? Explain its importance. Explain various reverse engineering task. 8
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