

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) ?

97676-9900-(P-4)(Q-9)(25)

P. T. O.

- (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

97676-9900-(P-4)(Q-9)(25) (2)

(b) Write short notes on : $2 \times 4 = 8$

- (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

97676-9900-(P-4)(Q-9)(25)

(3)

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- 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