(180-CU-404041) Roll No. .....

PAPER ID—10599

B.C.A. EXAMINATION, 2024

(Fourth Semester)

SOFTWARE ENGINEERING

Code : BCA-209

Time : 3 Hours *Maximum Marks : 80*

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

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

(Compulsory Question)

1. (a) What is a software metric ?

(b) Distinguish between Alpha and Beta testing.

(c) What is the purpose of the E-R diagrams ?

(d) Distinguish between implementation and maintenance.

(e) What problem arise if two modules have high coupling ?

(f) What are the limitations of the Prototype model ?

(g) State any *two* factors of quality assurance.

(h) What is a risk ? **8×2=16**

Unit I

2. (a) What is a software crisis ? Discuss various remedies that can be applied to get out of the software crisis.

(b) Explain Prototype Model along with its advantages and limitations. **8,8**

3. (a) What is the importance of SRS ? Discuss the characteristics of a good SRS document. 8

(b) What is DFD ? What are the symbols used for drawing DFD ? Explain the rules of drawing DFD. 8

Unit II

4. (a) What is project scheduling ? Explain project scheduling techniques. 8

(b) Explain the COCOMO model using a suitable example. 8

5. (a) What do you mean by risk ? Explain the different types of software risks. 8

(b) Explain size estimation in detail using a suitable example. 8

Unit III

6. (a) What do you mean by cohesion ? Discuss various levels of cohesion. 8

(b) How cohesion is related to coupling ? Discuss briefly. 8

7. Write short notes on the following : 16

(a) Software Metrics

(b) Object Oriented Design

(c) Relationship between Design and Implementation.

Unit IV

8. (a) What is software maintenance ? Explain reverse engineering in detail using a suitable example. 8

(b) Explain various software configuration management activities. 8

9. Write short notes on the following : 16

(a) Unit Testing

(b) Integration Testing and System Testing

(c) Debugging Activities.