

BCA 404

B.C.A. (PART-II) EXAMINATION, 2024-25

(Fourth Semester)

Paper : IV

Software Engineering



5547

Time : Three Hours]

[Maximum Marks : 70

- Note:** (i) Answer **Five** Questions in all.
(ii) Question No.-1 is **Compulsory**.
(iii) Answer remaining **four** questions, selecting **two** questions from each Section A and B.
(iv) All questions carry equal marks.
(v) Simple scientific calculator and log tables allowed.

1. Answer all parts of the following :
- (a) Differentiate between the waterfall models and Agile model.
 - (b) What is the difference between verification and validation ?
 - (c) What are functional and non-functional requirements ?
 - (d) What is a feasibility study in software engineering ?

Section-A

2. Define the term “Software Engineering”, What are the phases in the development of software ? Discuss in detail with advantages and disadvantages.
3. What are the different software development model ? Explain anyone of them in detail along with its advantage over other models.
4. What is software Testing ? Explain different types of testing in detail ?
5. What is software Quality Assurance (SQA) ? Explain its components and discuss different quality models.

Section-B

6. (a) Explain the utility and structure of the data dictionary in software documentation .
(b) What do you understand by Data Flow models ? Discuss its advantage and disadvantages.
7. (a) What do you understand by Top Down design and Bottom Up design ?
(b) What is software design ? Explain its Design principles in detail.

8. (a) What is software prototyping ? Discuss its types. Advantage and disadvantage in detail.
- (b) Why is software Risk management important ? Explain the process of risk strategies.
9. Write notes on any **two** of the following:
- (a) Coupling and Cohesion.
- (b) Spiral Model
- (c) Software Requirement Specification (SRS) document.

