# 19/1565
# B.C.A. (Fourth Semester) Examination, 2019
## Third Paper
## (Software Engineering)

***Time : Three Hours*** ***Maximum Marks : 75***

**Note**: Attempt any **five** questions. **All** questions carry equal marks.

**Note**: The answers to short questions should not exceed 200 words and the answers to long questions should not exceed 500 words.

1. (a) What do you understand by the term: legacy software? How does Software Engineering play a role in the development of quality software? 5+10

**P.T.O.**





(b) What are the different software development models? Explain any one of them in detail along with its advantage over other models.

2. (a) What do you understand by the terms: 'Process' and 'Entity'. What is a software process model? Explain with diagram. 5+5+5

(b) What is meant by software components? What are the uses of software components?

(c) Distinguish between the functional and non-functional requirements of a system.



3. Write short notes on: 15

(a) Requirements gathering

(b) Requirements validation

(c) SRS document

4. (a) Explain the utility and structure of the data dictionary in software documentation. 5+5+5

(b) What do you understand by Data flow model? Discuss its merits and demerits.

(c) Draw the DFD for any practical, real life system and explain it.

5. (a) Why is design important in Software engineering? Explain the use of software blue print methodology. 7+8

(b) Discuss :

(i) Analysis and design steps

(ii) Quality attributes and their guidelines

6. (a) Explain the process of factoring and integration in modular software design. 5+5+5

(b) What do you understand by : Top Down design, bottom-up design?

(c) Explain the different issues involved in user interface design.









7. (a) Compare the processes of software verification and validation. 7+8

(b) Write explanatory notes on :

(i) Integration Testing

(ii) Unit Testing

8. (i) Define the following terms with examples: 12+3

(a) Software Metrics

(b) Regression Testing

(c) CASE Tools

(ii) What are the desirable qualities of a 'good' coding style? Explain.

9. (a) Describe the Maintenance strategies for professionally developed software. Which strategy should be used under which preconditions? Discuss. 10+5

(b) What do you understand by Software Configuration Management?