

END TERM EXAMINATION

FOURTH SEMESTER [BCA] JUNE- 2024

Paper Code: BCA-204

Subject: Software Engineering

Time: 3 Hours

Maximum Marks: 75

Note: Attempt all questions as directed. Internal Choice is indicated.

Q1. Write short notes on **any five** of the following: - (5x5=25)

- (a) Differentiate between structural and functional testing.
- (b) Describe any two software size estimation techniques.
- (c) Discuss the need of data structure metrics.
- (d) What is software reverse engineering?
- (e) What are the characteristics of a good SRS?
- (f) Define cyclomatic complexity.
- (g) Discuss the RAD and Prototype SDLC models.

UNIT - I

Q2. Explain the various requirement elicitation techniques in detail. (12.5)

OR

Q3. Draw the E-R diagram, Use case diagram and Two Level DFD for Library Management System (12.5)

UNIT - II

Q4. Discuss the CoCoMo model in detail. Suppose that a project was estimated to be 600KLOC. Calculate the effort and development time for each of the three modes i.e., organic, semidetached and embedded. (12.5)

OR

Q5. Compare the Walston-Felix and SEL model for a S/W to be developed that involves an effort of 8 persons- years.

- (i) Calculate the number of line of source code that can be produced
- (ii) Calculate the duration of the development
- (iii) Calculate the productivity in LOC/PY
- (iv) Calculate the average manning. (12.5)

UNIT - III

Q6. What is a software module and cohesion? Discuss the various types of module cohesions that exists in various modules of a software. (12.5)

OR

Q7. Write short notes on

- (a) Total Quality Management(TQM)
- (b) Configuration Management
- (c) Software Re-Engineering

UNIT- IV

Q8. Consider the problem of identification of types of a triangle on the basis of the three sides in the domain (1,100). Generate the total number of test cases for performing Equivalence Class Testing and Decision table based testing for the said problem. (12.5)

OR

Q9. Discuss the need of software maintenance and also the different types of software maintenance performed to ensure the appropriate working of a software. (12.5)
