

Roll No



**PRESIDENCY UNIVERSITY
BENGALURU**

SET A

**SCHOOL OF INFORMATION SCIENCE
END TERM EXAMINATION - JAN 2024**

Semester : Semester III - 2022

Course Code : CSA2006

Course Name : Fundamentals of Software Engineering

Program : BCA Gaming and Graphics

Date : 04-JAN-2024

Time : 1:00 PM - 4:00 PM

Max Marks : 100

Weightage : 50%

Instructions:

- (i) Read all questions carefully and answer accordingly.
- (ii) Question paper consists of 3 parts.
- (iii) Scientific and non-programmable calculator are permitted.
- (iv) Do not write any information on the question paper other than Roll Number.

PART A

ANSWER ALL THE QUESTIONS

5 X 2M = 10M

1. Define software process. List its activities. (CO1) [Knowledge]
2. List two principles of good design. (CO2) [Knowledge]
3. What is SCM? (CO3) [Knowledge]
4. Define metrics. List the types of metrics. (CO4) [Knowledge]
5. Write short note on the various estimation techniques. (CO4) [Knowledge]

PART B

ANSWER ALL THE QUESTIONS

5 X 10 = 50M

6. Explain the Generic Software Process Model. Discuss the key activities involved in this model and how it accommodates various software development methodologies. (CO1) [Comprehension]
7. Explain about the various design concepts considered during design. (CO2) [Comprehension]
8. Mention all the formulae for cyclomatic complexity. Calculate the cyclomatic complexity for greatest among three numbers. (CO3) [Comprehension]

9. Outline the key steps involved in the SCM process, emphasizing its role in maintaining version control and managing changes.

(CO3) [Comprehension]

10. Explain the significance of CMMI levels in software development. What are the key characteristics of each CMMI level?

(CO4) [Comprehension]

PART C

ANSWER ALL THE QUESTIONS

2 X 20M = 40M

11. You are testing a password strength checker that evaluates passwords based on length and character complexity. Passwords must be between 8 and 12 characters long. Apply Equivalence Partitioning and Boundary Value Analysis to design test cases.

(CO3) [Application]

12. A project manager tasked with overseeing the development of a new mobile application. The project involves multiple teams working on different components, including frontend development, backend development, testing, and user interface design. The client has emphasized the importance of an early delivery, and the project has a fixed deadline. However, there is some uncertainty regarding the duration of testing, as it depends on the complexity of the application. How would you approach the project scheduling, considering the fixed deadline and testing uncertainty?

(CO4) [Application]