PRESIDENCY UNIVERSITY
BENGALURU

SCHOOL OF INFORMATION SCIENCE
END TERM EXAMINATION - JUN 2023

Semester : Semester IV - 2021
Course Code : CSA2006
Course Name : Sem IV - CSA2006 - Fundamentals of Software Engineering
Program : BCG,BCVBSD&BCA

Date : 7-JUN-2023
Time : 1.00PM - 4.00PM
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   10 X 2 = 20M

1. What is Software Quality Assurance?

    (CO3) [Knowledge]

2. List out the levels of bottom up approaches of Design model

    (CO2) [Knowledge]

3. What are the reasons behind to perform white box testing?

    (CO3) [Knowledge]

4. List out the symbols in an Activity Diagram

    (CO2) [Knowledge]

5. Explain some important activities that a software project manager performs during software project planning

    (CO4) [Knowledge]

6. Explain the role of scrum master?

    (CO1) [Knowledge]

7. List the goal for collaborative requirement gathering for eliciting requirement.

    (CO2) [Knowledge]

8. List any two drawbacks of waterfall model.

    (CO1) [Knowledge]

9. List the factors involved in risk planning

    (CO4) [Knowledge]

10. Explain which model of software development is well suited to the system where all the requirements are known at the start of a Project and remain stable throughout the project.

(CO1) [Knowledge]

PART B

ANSWER ALL THE QUESTIONS   5 X 10 = 50M

11. What is software engineering, and why is it important in the development of complex software systems?

(CO1) [Comprehension]

12. Describe equivalence partitioning and boundary value analysis in detail.

(CO3) [Comprehension]

13. Explain different types of Architectural Styles in detail.

(CO2) [Comprehension]

14. Assume that the size of an organic type software product has been estimated to be 32,000 lines of source code. Assume that the average salary of a software developer is Rs. 15,000 per month. Determine the effort required to develop the software product, the nominal development time, and the cost to develop the product.
consider the constant values:a1=2.4,a2=1.05,b1=2.5,b2=0.38

(CO4) [Comprehension]

15. Explain about User interface design model in detail.

(CO2) [Comprehension]

PART C

ANSWER ALL THE QUESTIONS   2 X 15 = 30M

16. Software testing strategy is the set of steps that need to be done to assure the highest possible quality of an end product. In this perspective, state and explain the testing strategies in software testing. Also, enumerate the differences between Black box testing and White Box testing.

(CO3) [Application]

17. An automobile company is planning to implement automation software for their cars to assist the drivers. As it is a new technology, developers are unfamiliar with it. On discussing how to build the software, the team concluded that software is complex and requires a high degree of safety features to prevent any chance of software malfunctioning and causing accidents. Which software process model suits this situation? Explain the selection and describe the model chosen with a diagram.

(CO1) [Application]