PRESIDENCY UNIVERSITY
BENGALURU

SCHOOL OF ENGINEERING

MAKEUP EXAMINATION – JAN 2023

Course Code: CSE 2014

Course Name: SOFTWARE ENGINEERING

Program: B.Tech

Date: 24-JAN-2023

Time: 09.30 AM TO 12.30 PM

Max. Marks: 100

Weightage: 50%

Instructions:
(i) Read the all questions carefully and answer accordingly.

Part A [Memory Recall Questions]

Answer all the Questions. Each question carries FIVE marks. **(04Q x 05M = 20M)**

1. List the Principles to be followed by the software engineers. Discuss. [C.O. No. 1] [Knowledge]

2. Define and compare functional and non-functional requirements. [C.O. No. 2] [Knowledge]

3. Give the types of Stakeholders? Also discuss their roles. [C.O. No. 3] [Knowledge]

4. What is boundary value analysis? Explain with an example. [C.O. No. 4] [Knowledge]

Part B [Thought Provoking Questions]

Answer all the Questions. Each question carries FIFTEEN marks. **(04Q x 15M = 60M)**

5. ABC Software limited developing projects based on the customer's requirement. The customer has provided well defined requirements to the developer. Developer has confusion to decide waterfall model or Iterative water fall model. Help the developer by comparing both models and justify which model will be more suitable here. [C.O. No. 1] [Comprehension]

6. "SRS document describes all aspects of a software to be built". Justify the above statement and develop a sample SRS document. (C.O. No. 1) [Comprehension]

7. Agile is one of the most popular principles used by organizations around the world. Despite the presence of different project management approaches, Agile is considered one of the most practical and flexible software development mechanisms that exist today. In this regard, state and explain the difference between the traditional waterfall and agile models. Additionally, With regard to scrum and sprint in Agile methodologies, discuss the following: a. What are the scrum events? b. What is the time limit of a sprint in agile? (C.O. No. 3) [Comprehension]

8. Mr. Joseph wants to transfer money to his wife from his bank account. For completing this transaction, he needs to enter OTP. The OTP should be between 4 to 6 digits/number. Using Equivalence Partitioning and Boundary value analysis techniques, find and generate the test cases for valid and invalid OTP.   [C.O. No. 4] [Comprehension]

Part C [Problem Solving Question]

Answer the following Question. It carries TWENTY marks.   **(1Q x 20M = 20M)**

9. What is Cyclomatic Complexity? Draw the Control Flow Graph (CFG) for the following code:

min = A[0];

 I = 1;

 while (I < N) {

   if (A[I] < min)

     min = A[I];

   I = I + 1;

 }

 print min

Compute the Cyclomatic Complexity of the resultant CFG of the above code and list out the number of paths

                                                        (C.O. No. 4) [Application]