Subject Code: IT301 Enrollment No.....

MID TERM EXAMINATION-SEPTEMBER 2024

Software Engineering

Time: 01Hr Maximum marks: 30

Note: Attempt questions as per Instructions

SECTION-A (Attempt any two questions, Each of 05 Marks)

Q1. Explain the spiral model of software development. What are the limitations of such a model?

Q.2. Compare the Walston-Felix model with the SEL model on a software development expected to involve 8 person-years of effort.

a) Calculate the number of lines of source code that can be produced.

b) Calculate the duration of the development.

Q.3. Explain how the CMM encourages continuous improvement of the software process.

SECTION-B (Attempt any One question, Each of 10 Marks)

Q.1. Discuss the Agile Methodology, its manifesto and 12 agile principles. Elaborate in detail.

Q.2. Consider a program for determining the Previous date. Its input is triple of day; month and year with the values in the range

1 <= month <= 12

1 <=day <=31

1900 <= year<= 2025

The possible outputs would be Previous date or invalid input date. Design the boundary value test cases.

SECTION-C (Compulsory, 10 Marks)

Q.1. A new project with an estimated 400 KLOC embedded system has to be developed. Project manager has choice of hiring from two pools of developers: Very highly capable with very little experience in the programming language being used (LEXP= 1.14 and MODP =0.82) Or developers of low quality but a lot of experience with the programming language (AEXP=1.29 and LEXP=0.95). What is the impact of hiring all developers from one or the other pool ?

Project	a_i	b_i	c_i	d_i
Organic	3 2	1.05	2.5	0.38
Semidetached	3.0	1 12	2.5	0.35
Embedded	2.8	1.20	2.5	0.32