SVKM's
Dwarkadas J. Sanghvi College of Engineering
Acad .Year 2022-2023
YEAR III / Semester VI

Program: B.Tech in Computer Engineering
Subject/Course: Software Engineering
Date: 26.05.2023

Max. Marks: 75
Time: 09:00-12:00
Duration: 03:00 Hrs

FINAL EXAMINATION

Instructions: Candidates should read carefully the instructions printed on the question paper and on the cover page of the Answer Book, which is provided for their use.

(1) This question paper contains 02 pages.
(2) All Questions are Compulsory.
(3) All questions carry equal marks.
(4) Answer to each new question is to be started on a fresh page.
(5) Figures in the brackets on the right indicate full marks.
(6) Assume suitable data wherever required, but justify it.
(7) Draw the neat labelled diagrams, wherever necessary.

Question No.		Max. Marks
Q1 (a)	Explain how the principles underlying agile methods lead to the accelerated development and deployment of software. **OR** With a neat diagram explain the spiral model of software development.	[05] [05]
Q1 (b)	i. Why should one use Prototype model? ii. Discuss the advantages and disadvantages of the prototype model.	[05] [05]
Q2 (a)	Draw the DFD up to Level 2 for a Restaurant Management System which has online food ordering, food delivery, GST calculation, invoice creation and payment subsystems. **OR** Draw Use Case Diagram and Class diagram for Online Railway Reservation System with analysis.	[10] [10]
Q2 (b)	Requirements analysis is unquestionably the most communication-intensive step in the software engineering process. Why the communication path is playing a vital role in requirement gathering?	[05]
Q3 (a)	Briefly explain software configuration management.	[05]
Q3 (b)	Discuss the different categories of risk that help to define impact values in a risk table. **OR** i) What are the different categories of Risk? ii) Briefly explain the steps in developing RMMM plan.	[10] [05] [05]
Q4 (a)	What is the role of testing in software engineering? What is White Box and Black Box testing? **OR**	[10] [10]

	What is testing? Explain the different strategies of testing.	
Q4 (b)	Calculate cyclomatic complexity for the given code-	[05]

	{ int i, j, k;
	for (i=0 ; i<=N ; i++)
	p[i] = 1;
	for (i=2 ; i<=N ; i++)
	{
	k = p[i]; j=1;
	while (a[p[j-1]] > a[k]){
	p[j] = p[j-1];
	j--;
	}
	p[j]=k;
	}
	}	

Q5 (a)	Explain DevOps Toolchain with diagram.	[10]
Q5 (b)	Differentiate between function-oriented metrics and size-oriented metrics. OR Explain work break down structure with suitable example.	[05] [05]

All the Best!