SVKM's NMIMS
MUKESH PATEL SCHOOL OF TECHNOLOGY MANAGEMENT & ENGINEERING

Programme: B.Tech (Computer) Year: III Semester: V

Academic Year: 2019-20

Subject: Software Engineering

Date: 09 November 2019

Marks: 70
Time: 10.00 am - 1.00 pm
Duration: 3 (hrs)
No. of Pages: 2

Final Examination (2019-20)/ Re-Examination (2017-18/ ~~2018-19~~)

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

1) Question No. 1 is compulsory.
2) Out of remaining questions, attempt any 4 questions.
3) **In all 5 questions to be attempted.**
4) All questions carry equal marks.
5) **Answer to each new question to be started on a fresh page.**
6) **Figures in brackets on the right hand side indicate full marks.**
7) **Assume suitable data if necessary.**

Q.1			
	(a)	How the prototype model solve the problems over waterfall model?	3
	(b)	What is requirement analysis? Write major activities of requirement analysis.	4
	(c)	What is the difference between test case and test suite? Describe with example.	3
	(d)	What is the difference between traditional software development method and agile method?	4
Q.2	(a)	Explain Mccall's Software Quality Factors in detail.	7
	(b)	Explain SCRUM agile development approach with suitable diagram.	7

Q.3	(a)	Calculate the Cyclomatic complexity for the following program:
		int temp
		if (a>b) temp=a
		else temp=b
		if (c>temp)
		temp=c
		return temp
			7

	(b)	Explain the golden rules for user interface design.	7
Q.4	(a)	Consider a project with following functional units— Number of user inputs=50 Number of user outputs=40 Number of user enquiries=35 Number of user files=06	7

Number of external interfaces=04
Assume all weighting factors are average. In addition to above, system requires—
i. Significant data communication
ii. System is not designed for multiple installations in different sites
iii. Designed code should be reusable
iv. Performance is very critical
Assume all complexity adjustment factors are treated as average.
Computer the function points for the project.

(b) Explain the working of Spiral Model. Why spiral model is considered to a meta model. 7

Q.5 (a) Explain SQA and their activities in detail. 7

(b) How reverse engineering is different from reengineering process? Explain with suitable diagram. 7

Q.6 (a) Draw DFD up to level 2 for result preparation automation system of B.Tech. Courses of any university. 7

(b) What do you understand by software architecture? Discuss the different classification of architectural styles with respect to software. 7

Q.7 Write short note:

(a) Characteristic of Software 4

(b) CMMI 4

(c) Software Configuration Management 3

(d) Black Box versus White Box Testing 3