



Academic Year (2021-22)		
Year: 3		Semester: VI
Program: B. Tech. (Computer Engg.)	Max. Marks: 75	
Subject: Software Engineering	Time: 10:30 am to 1:30 pm	
Date: <del>30/06/2022</del>	Duration: 3 Hours	
01/07/2022	RE REGULAR 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 03 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 the steps in Component Level Design  OR Explain the Analysis model by explaining all the different elements in the model.	[10]  [10]
Q1 (b)	"MyBank" is an online banking solution that allows customers to create account (savings/checking), perform internet banking, open recurring deposits, fixed deposits, transfer funds etc. Design a detailed Use Case diagram to depict the scenarios of "MyBank". List the actors and briefly explain each use case. Make use of <<include>> and <<extends>>.	[05]
Q2 (a)	Explain equivalence partitioning and boundary value analysis in Black Box Testing. Comment on why these methods are useful.  OR Explain the Control Structure testing in White Box Testing. Comment on when these tests will be used.	[10]  [10]





Q2 (b)	<p>For the code given below, draw the flow graph, calculate the cyclomatic complexity by all three methods and list the independent paths</p> <pre>int strequal (char x[],char y[ {   int I = 0, same = 0;     if(x == y)         same =1;     else while (x[i] == y[i])         {   if x[i] == '\0'             {       same = 1;                 y[i] = '\7';             }             else i++;             /*endif*/         } /*endwhile*/      /*endif*/      return(same); } /*endstrequal*/</pre>	[05]
Q3 (a)	What is DevOps? Explain how to use DevOps?	[05]
Q3 (b)	Explain Scrum Model of Agile methodology.	[10]
	<b>OR</b> Explain the Software Framework Activities and Umbrella Activities in detail.	[10]
Q4 (a)	Consider a database application project with four screens with four views each and seven data tables for three servers and four clients. The application may generate two reports of six section each from seven data tables for two servers and three clients. There is a 10% reuse of object points. With the developer's experience and capability in similar environment low calculate the object point count, New object point and effort to develop such project. Clearly show all the necessary tables and the considerations of complexity.	[07]
Q4 (b)	Explain the steps in Requirements Engineering.	[08]
	<b>OR</b> Explain the scenario-based elements of the Analysis model.	[08]
Q5 (a)	Given that all reusable software must conform to specific design standards and that some do not conform, then there is concern that (possibly) only 80% of the planned reusable modules may actually be integrated into the as-built system, resulting in the need to custom engineer the remaining 20% of components.  Prepare a Risk Information Sheet that should include Description,	[08]





	Refinement / context, Mitigation / monitoring, Management/contingency plan and Current status sections with other details to deal with this risk. Show the Risk Exposure calculation also if any.	
Q5 (b)	<p>What are the elements of Configuration Management System? Explain Software Configuration Items and Baselines? List the work products that can be included as baselines.</p> <p style="text-align: center;"><b>OR</b></p> <p>Explain Risk management with suitable diagram</p>	<p>[07]</p> <p>[07]</p>

**All the Best!**