DR. BABASAHEB AMBEDKAR TECHNOLOGICAL UNIVERSITY, LONERE

Supplementary Summer Examination – 2023

Semester: Fifth

Branch: Computer Engineering

Course: B. Tech.

	Subject Code & Name: BTCOC503 Software Engineering						
	Max Marks: 60	Date:	11 August 2023	Duration: 3	Hr.		
	which the ques 3. The use of non	ns are compu uestion/expect stion is based -programma	ulsory. ted answer as per OBI is mentioned in () in ble scientific calculato ever necessary and me	front of the questions is allowed.	, ,	Marks	
Q. 1	Solve Any Two of the	e following.			()	12	
A)	What is object-oriente	<u> </u>	ng (OOP)? Describe t	he fundamental	Understand	6	
	principles of OOP and how they contribute to software design and						
	development.						
B)	Provide an OO design	Analyse	6				
	"Build a software system that stores customers' contact						
	detailssuch as	mobile numl	ber, WhatsApp numbe	r, mail ID			
	and date ofbir	th. The syste	em should give birth	nday			
	greetings and	festivalgreet	ings to the customers.	"			
	The OO design should include classes, relationships and methods.						
	Draw aclass diagram in UML.						
C)	Compare and contras	t agile and w	aterfall software devel	lopment	Remember	6	
	methodologies. Highlapproach.	ight the advar	ntages and disadvantag	ges of each			
Q.2	Solve Any Two of the	e following.				12	
A)	Define software testi	ng and its in	nportance in the deve	lopment process.	Analyse	6	
	Describe at least three	ee different t	ypes of testing and p	provide scenarios			
	where each type woul	d be most eff	ective				
B)	Explain the significa	nce of cont	inuous development	and continuous	Analyse	6	
	integration in the DevC	ps project pi	peline				
C)	Suggest an appropriat	e process mo	del for the projects. Ju	stify your	Analyse	6	
	answers.						
	1. IOT-based wat	ter-level mon	itoring system.				
	2. Website develo	opment for a	restaurant				
	3. A Mobile appl	ication to tra	ck students' attendanc	e			
Q. 3	Solve Any Two of the	e following.				12	

*** End ***						
C)	What is Hyrum's law? Explain with an example	Remember	6			
	LOC (4) Fan-in and Fan-out					
B)	Define the following quality attributes: (1) Cohesion (2) Coupling (3)	Create	6			
	returns the sum of all even numbers in the list.					
A)	Write pseudocode for a function that takes a list of integers as input and	Remember	6			
Q. 5	Solve the following.		12			
	prevent or mitigate these issues.					
	behind its failure. Discuss what could have been done differently to					
C)	Analyse a recent software project failure and identify the key reasons	Remember	6			
	(3) Scalability, (4) Reliability					
B)	Define the following quality attributes: (1) Modifiability, (2) Portability,	Remember	6			
	consistency and avoid conflicts.					
	would handle concurrent access to a shared bank account to ensure data					
A)	Imagine you're developing a banking application. Describe how you	Analyse	6			
Q.4	Solve Any Two of the following.		12			
	for the successful implementation of the system.					
	requirements for the software. Explain why each requirement is important					
	clinic. Identify and categorize three functional and three non-functional					
C)	Consider a scenario where you are developing software for a medical	Remember	6			
	repository					
	the context of GitHub. (1) fork, (2) merge, (3) pull request, (4) cloning a					
B)	Give the syntax of the following commands and explain their purpose in	Remember	6			
	associations, attributes, and methods.					
,	that includes classes for books, library members, and transactions. Include					
A)	Given a scenario, design a class diagram for a library management system	Create	6			