Continuous Assessment Test (CAT) – II – OCTOBER 2024

Programme	:	MCA (Master of Computer Applications)	Semester	:	FALL 24-25
Course Code & Course Title	:	PMCA504L Software Engineering	Slot	:	F1+TF1
Faculty	:	Dr. A Sheik Abdullah	Class Number	:	CH2024250103067
Duration	:	90 Minutes	Max. Mark		50

General Instructions:
Write only your registration number on the question paper in the box provided and do not write other information.

Answer all questions

Q. No	Sub Sec.	Description	Marks
1.		A customer visits the online shopping portal. A customer may buy item or just visit the page and logout. The customer can select a segment, then a category, and brand to get different products in the desired brand. The customer can select the product for purchasing. The process can be repeated for more items once the customer finishes selecting the product/s the cart can be viewed, if the customer wants to edit the final cart it can be done. For final payment the customer has to login the portal, if the customer is vising the portal for the 1st time he/she must register with the website, else the customer shall use the login page to proceed. Final cart is submitted for payment and card details and address (where the shipment has to be made) are confirmed by the customer. Customer is confirmed with the shipment ID and delivery of goods is made within 15 days. Illustrate the applicability of appropriate behavioral diagrams for the above scenario.	10
2.	a)	Assume that you have been contracted by a university to develop an Online Course Registration System (OCRS). First, act as customer and specify the characteristics of the system. Developing an OCRS entails multiple elements, such as a user interface for students, a database for information storage, and server-side logic for managing registration, payments, and course administration. Apply suitable structural diagram for the given scenario and explain the same.	5
2	b)	Do you think that a good software requirement leads to good software quality? Discuss briefly from requirement engineering perspective.	5
3.		Consider that you have been assigned as a member of Quality Assurance (QA) group that defines and assigns the tasks, work product and processes that will be performed in the software development. For a banking application Illustrate how will you perform the following tasks: a. Review products, tools, services and facilitate against requirements, standards and guidelines. (2 Marks) b. Audit project processes for compliance with standards, and to establish best practices, process evaluation and verification tasks that are described in the QA process. (2 Marks) c. Peer reviews and project reviews (technical and management reviews) by providing status on compliance, problem areas and	10

		risks. (1 Mark) d. Suggest methods, standards, guidelines and tools to be defined for the project. (1 Mark) e. Report results of product and service evaluations. (2 Marks) f. A summary about improvement information on the QA process and description of the defined process. (2 Marks)	

4.		Compare and contrast Formal Technical Review (FTR) and Informal Review (IR) based on the following perspective:
		    a. Objectives (2 Marks)
		    b. Process steps (5 Marks)
		    c. Guidelines (3 Marks)
			10

5.		In the customer point of view while investigating the quality of a product the following questionaries' can be raised:
		
		• Does the software adequately meet quality factors?
		• Has software development been conducted according to pre-established standards?
		• Have technical disciplines properly performed their roles as part of the SQA activity?
		
		Assume that you have been assigned to be the quality engineer of a XYZ product with a planned set of SQA platform.
		    a. Illustrate about the set of activities that address quality assurance planning, oversight, record keeping, analysis, and reporting. (5 Marks)
		    b. Elaborate on SQA product characteristics, tasks and its formal approaches. (5 Marks)
			10

**********All the best *************