Sardar Patel Institute of Technology
Bhavan's Campus, Munshi Nagar, Andheri (West), Mumbai-400058, India
(Autonomous College Affiliated to University of Mumbai)

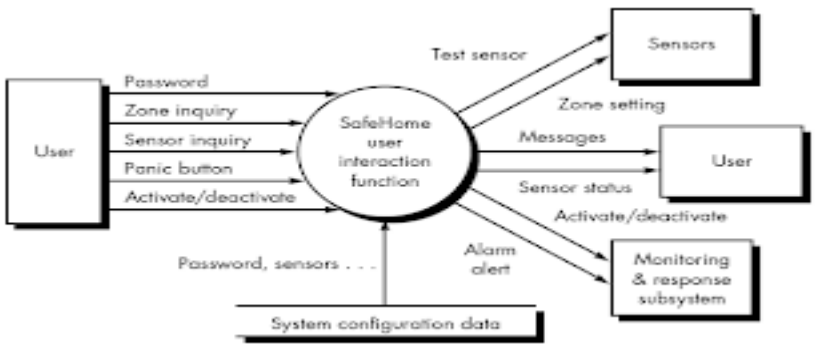
End Semester Examination
May2022

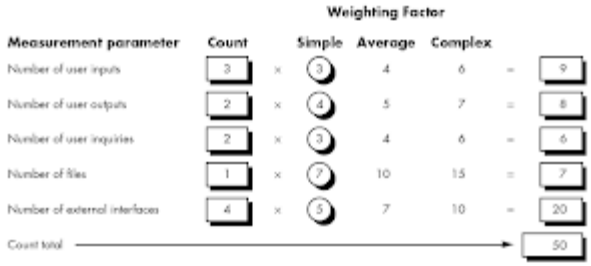
Max. Marks: 60 | Duration:2hrs 15mins
Class: FYMCA | Semester: I
Course Code: MC503 | Date: 17/5/22
Course: Software Engineering | Time: 11.00 a.m. to 1.15 p.m.

Instructions:
(1) All Questions are Compulsory
(2) Draw neat diagrams
(3) Assume suitable data if necessary

Q. No.	Question	Max. Mks	CO_BL
1A.	Consider a team is building an ecommerce website, the final target product has Search, Product information, a Shopping basket, checkout, favorites, and customer reviews. Analyze the requirement and Compare how the team will develop the Product using Incremental Approach and Iterative approach. Incremental Approach(5mks) Iterative approach(5mks) OR Differentiate between Epic, User stories in Agile methodology with an appropriate Example. Epic with example in detail (3mks) User story with example in detail (3mks), Difference (4 mks)	10	1_4
1B.	What are the different categories of Feasibility study which are carried in Software Requirement Specification? Feasibility study -Economic feasibility, Operational feasibility,Legal,Schedule,e.t.c any 3 with explanation	05	1_4
2 A.	Construct a Use Case Diagram for the following case study:-The Course ware management system that can be used to manage courses and classes for an organization that specialize in providing training. The organization offers a variety of courses in a variety of areas such as learning management techniques & understanding different software languages and technologies. Each course is made up of a set of topics. Tutors in the organization are assigned courses to teach according to the area that they are specialized in and their availability. The organization publishes and maintains a calendar of different	10	2_6

	courses and assigns tutors every year. There is a group of course administrators in the organization to manage the courses including course content, assign courses to the tutor and define the course schedule. The training organization aims to use the courseware management system to get better control and visibility to the management of courses as also to streamline the process of generating and managing the schedule of the different courses.(specification must). Diagram with boundary ,Actors,Includes,Extends(7mks) and specification(3mks)		

2 B.	Elaborate any one design pattern that provides a strategy to solve a common problem in software. Assume a suitable example to justify your answer. Design Pattern and its types (1mks) Explanation (4mks) OR Consider an Enterprise Resource Planning System which has different modules Employee details, Sales, Marketing, Human Resource, etc... Which are interdependent in nature. Construct a suitable software architecture design with justification to show the interaction between them. Pipe and filter Model Explanation / Client Server (4 mks) Diagram (1 mk)	05	2_6
3 A.	Which approach of Agile estimation techniques would you make use of if the user story needs to be prioritized in a short time? Dot voting explanation(2mks) Comparison with other techniques (6mks) Explanation with example(2mks)	10	3_3
3B.	 Consider the above diagram and Solve the function point for the project Assume all complexity adjustment factors & weighting factors	05	3_3

	are simple. Fi =46 **FP = 50 [0.65 + (0.01 46)] = 56**  		
4A.	Choose and explain appropriate Testing Technique ,Black Box or White Box is more suitable for following situations and justify your answer with help of suitable test cases (at least 5): 1.A user logged in when inputs a present username and correct password 2.A user receives an error message when enters username and Incorrect password. Black Box Testing Techniques is used (1 mark) Explanation (3mks) Test cases for each case (6mks)	10	4_3
4 B.	Google has spent several years developing self-driving cars which rely on a range of sensors, software and stored data and are now claimed to have covered hundreds of thousands of miles with a good safety record. A Google executive has now asked to meet the Transport Secretary, who has in turn asked your company for advice. Which Software Quality Factors will you select to ensure the product is up to the mark? Product Transition and Revision (5mks) Cleanroom Software Engineering	05	4_3