

End Semester Examination

May 2021

Max. Marks : 60

Class : TE Computer

Course Code : CE 63

Name of the Course: Software Engineering

Duration: 120 Minutes

Semester: VI

Branch : Computer Engineering

Instructions:

(1) All Questions are Compulsory

(2) Draw neat diagrams

Question No.		Max. Marks	CO
Q1a)	Match the following a) Requirement analysis 1) Meet user needs b) Agile spikes 2) Matches SRS c) Unit Testing 3) Potential solution d) Software Verification 4) Implementation phase e) Software Validation 5) Non-functional requirements	5	CO1
Q1b)	How is agility achieved in agile software development model? How is progress measure achieved in agile development?	2.5 + 2.5	
Q1c)	Software architecture is important to meet software quality and reusability. Discuss with example.	5	
Q2a)	Smart Map is a software system that would support a smart tower plotting system called OTPS that allows plotting towers on the defined map. This Project helps in plotting the tower images on Satellite Map. Site engineer can select particular shape and colour of the mark that will reflect the position of a particular tower on the satellite map. It holds the information about all the towers of operators in various site locations which control different MSCs in company and getting tower information by clicking on the image. In this we can create, delete and update the tower information. This software system helps in calculating the distance between two towers in a particular MSC. The search option will be there for searching a particular tower by name, site identity number, latitude and longitude. For adding information about a particular site, the Site engineer can upload the file in a format supported by the software, which is the indirect means of adding information regarding new sites/towers into the database. For security reasons this project provides usernames and passwords to control the information. Also a site engineer can create new login ids for his/her subordinates (like trainee	10	CO2

	<p>etc.) who can also manage the sites in concurrently. The user can move to any location by dragging the mouse over the Satellite map window and user can also zoom in and zoom out by using zoom slider.</p> <p>Bugs can be in any of the 4 states - open, in progress, on hold, closed</p> <p>Create a Gantt chart for this project's Implementation, testing and deployment phase.</p>		
Q2b)	<p>Project schedule becomes a road map that defines the tasks and milestones to be tracked and controlled.</p> <p>List 5 different ways that can be used to perform tracking.</p>	5	
Q3a)	<p>Seaview hotel is a 50 room property in Mumbai. The hotel has extremely good service at affordable prices. However as part of business expansion plan, the management plan to develop a website. You are the project manager in charge of the project. Identify 5 potential risk to the development team that may arise during SDLC of the project. Create risk table and the mitigation activity for each risk. (add one column as mitigation activity in risk table)</p>	5+5	CO3
Q3b)	<p>Discuss the need for risk analysis in software project. Explain risk response strategies with software related example.</p> <p>Assume you are a software project manager and that you've been asked to compute earned value statistics for a small software project that create widgets. The plan is to make 500 widgets with a total budget of Rs.10000 expecting to make 20 widgets per day .At the end of 5 days it is found that 70 widget were created due to training the team on the tool to be used and the training cost is Rs.2000. Calculate CPI and SPI of the project at the end of 5 days.</p>	5	CO2
Q4a)	<p>Discuss software Refactoring and Reverse engineering with example.</p> <p style="text-align: center;">OR</p> <p>Explain software change control process. List 5 reasons for software change</p>	10	CO4
Q4b)	<p>After fixing bugs in system, should the system be retested? Justify</p> <p>A program has number of bugs equal to your UID. For testing the program, four techniques are used one after other. Each technique can</p>	2.5 + 2.5	

	detect 40% of the bugs in the system at start of testing. In addition, a bug fix can lead to new bug with a chance of 50% . Calculate the number of bugs that will remain after testing and bug fixing.		
--	---	--	--

