Sri Sivasubramaniya Nadar College of Engineering, Kalavakkam – 603 110

(An Autonomous Institution, Affiliated to Anna University, Chennai)

Department of Computer Science and Engineering

Continuous Assessment Test – IV (Model Revision Test)

Question Paper

Degree & Branch	BE (CSE)				**Semester**	IV
Subject Code & Name	UCS1405 Software Engineering				**Regulation: 2018**	
Academic Year	2019-2020 EVEN	**Batch**	2018-2022	**Date**	**20.07.2020**	**02.00 – 04.00 pm**
Time: 90 Minutes	**Answer All Questions**				**Maximum: 60 Marks**	

Part – A

Answer any FOUR questions (4 X 5 = 20 Marks)

<KL2>	1. a. Enumerate the set of tasks involved in the process of planning the software development. (2) b. Use the software equation to estimate the minimum development time and effort to develop the IoT based Attendance monitoring software. Assume that P = 8000 and B = 0.3. (3)	<CO2>
<KL3>	2. The relationship between people and time is highly nonlinear. Using Putnam's software equation, develop a table that relates number of people to project duration for a software project requiring 50,000 LOC and 15 person-years of effort (the productivity parameter is 5000 and B is 0.37). Assume that the software must be delivered in 24 months plus or minus 12 months.	<CO2>
<KL3>	3. a. What is meant by usability constraints in a requirement? (1) b. List any two usability constraints for Chrome software. (4)	<CO3>
<KL3>	4. a) Differentiate elicitation and negotiation. (2) b) Apply elicitation and negotiation process for Video conferencing software like Zoom or GMeet. (3)	<CO3>
<KL3>	5. Develop a complete use case for using your debit / credit card for a meal at a restaurant.	<CO3>
<KL2>	6. Define a traceability matrix. When is it created? How is it helpful?	<CO2>
PART – B **Answer any FOUR questions (4 X 10 = 40 Marks)**		
<KL3>	7. Assume that you are the project manager for a company that builds IoT based Attendance monitoring system. You have been contracted to build the software for Attendance monitoring system in an academic institution, using cameras for face recognition. a. Write a statement of scope that describes the software. Be sure your statement of scope is bounded. Also, state your assumptions about the hardware that will be required. (4) b. Do a functional decomposition of the attendance monitoring system software which you described above. Estimate the size of each function in LOC. (3) c. Assuming that your organization produces 450 LOC/pm with a burdened labour rate of Rs.7000 per person-month, estimate the effort	<CO2>

	and cost required to build the software using the LOC-based estimation technique (3)	
<KL3>	8. a. Select an appropriate task set for the IoT based Attendance monitoring system. (5) b. Define a task network for the IoT based Attendance monitoring system. Be sure to show tasks and milestones (5)	<CO2>
<KL3>	9. Identify the following risks in developing an Antivirus software or Video conferencing software. (a) Project (b) Technical (c) Business (d) Predictable (e) Unpredictable risk	<CO2>
<KL2>	10. a. Briefly explain the steps in requirements engineering process. (5) b. Define a traceability matrix. When is it created? How is it helpful? (5)	<CO3>
<KL2>	11. List the different techniques for eliciting requirements. Bring out the pros and cons of each technique. Identify scenarios where each of these techniques would be useful	<CO3>
<KL3>	12. Consider developing a video conferencing software like Zoom. (a) Build a dynamic behavioural model using state diagram. (b) Capture the input, output and the process and represent process activation table.	<CO3>