

**Department of Computer Applications**  
**MCA, 3rd Semester**  
**CT-1 Examination, (2021-22) Odd Semester**  
**Software Engineering (KCA-302)**

**Duration: 2hrs****Max. Marks: 60****Section-A****Attempt all the questions of this section (2X10=20)**

Q. No.	Question	Marks	CO	BL/ KC
1.	a State the notations used for creating a State Chart diagram.	2	1	1/F
	b Describe are the components of a Software	2	1	2/F,C
	c Differentiate between Interview and Brainstorming techniques of Requirement Elicitation.	2	1	2/F,C
	d Explain the categories through which we may select appropriate life cycle model.	2	1	2/C
	e Label different types of software?	2	1	2/F
	f Contrast Correctness and Completeness in terms of requirements	2	2	2/C
	g Discuss Feasibility Study?	2	2	2/F
	h Describe the type of situations where iterative enhancement model might lead to difficulties.	2	1	2/C
	i State the problems in the formulation of requirements.	2	2	1/C
	j List the 3 reasons for Software Crisis.	2	1	1/C

**Section-B****Attempt all the questions of this Section (5X4=20)**

Q. No.	Question	Marks	CO	BL/ KC
2	Relate functional requirements with nonfunctional requirements of a proposed software system. For a bank ATM (Automated teller Machine) system, illustrate (at least two) functional and non-functional requirements for bank ATM system.	5	2	3/C,P
	OR A company decides to develop a web site, which lets people buy and sell their software applications. This company works as negotiator between buyers and sellers and takes commission for this service. The company aims to develop this website user friendly. You are required to study this idea deeply and prepare Functional requirement specification of placing online order module.			
3	Express the reason that classical waterfall model can be considered impractical and cannot be used in real projects.	5	1	2/C,P
	OR Identify three reasons for the necessity of developing a prototype during software development.			
4	A hospital named XYZ requires a laboratory management system and has contacted your firm. You have 20 programmers, out of which 15 are busy with other projects for the time being. The hospital intends to acquire laboratory equipment, which they want to interface with the computer system. The annual evaluation of the hospital is due soon, in which computerization initiatives are appreciated.	5	1	2/C,P
	Describe the most appropriate the life cycle model chosen for the above case and explain the reasons for choosing the process model.			
	OR Demonstrate with an example for different stages through which a software product undergoes during its lifetime.			
5	Discuss the significance of requirement engineering. Also write the various steps with requirement engineering with proper explanation.	5	2	2/C,P
	OR Summarize on user requirements and system requirements in detail with consideration of Online Railway Reservation System			

- **CO** –Course Outcome, generally, refer to traits, knowledge, skill set that a student attains after completing the course successfully.
- **BL**–As per Revised Bloom's Taxonomy, Bloom's Levels (BLs) are the cognitive process levels viz. **1.** Remember, **2.** Understand, **3.** Apply, **4.** Analyze **5.** Evaluate and **6.** Create
- **KC** –As per Revised Bloom's Taxonomy, Knowledge Categories (KCs) are **F** - Factual, **C** - Conceptual, **P** – Procedural, **M** - Metacognitive

**Section-C****Attempt all the questions of this Section****(10X2=20)**

<b>Q. No.</b>	<b>Question</b>	<b>Marks</b>	<b>CO</b>	<b>BL/ KC</b>
6	Both the evolutionary as well as the spiral life cycle models have been designed for large projects, identify how exactly risk is handled in each. How do these two models compare with each other in respect to their iterative, incremental and risk handling capabilities?	10	1	3/C,P
	OR			
	Outline the advantages and disadvantages of Iterative Model? When to use Iterative Model, elaborate with an example.			
7	Consider the process of ordering a pizza over the phone. Draw the use case diagram representing each step of the process, from the moment you pick up the phone to the point where you start eating the pizza. [You may also include activities that others need to perform by the software system]	10	2	3/C,P
	OR			
	Consider an online railway reservation system, which allows the user to select route, book/cancel tickets using net banking/credit/debit cards. The site also maintains the history of the passengers. For the above system, list and draw the use case scenario and model the above specification			

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