

QuestionBank/TopicLearningOutcomes

Course Details					
Class: II Year, B. Tech		Semester: II	AcademicYear:2024-25		
Course Title:DESIGN THINKING & INNOVATION		Course Code: 23A99401	Credits: 3		
Program/Dept.: Common for all Branches			Batch: 2023-2027		
Regulation: R-23					
Faculty:Dr B Sunil kumar/M Santhi/R.Ashok					
Module No:	Q. No	TopicLearningOutcomes/QuestionBank/MCQ/Lab Experiments/ Tutorial Task Labelstothe right indicate: CO=CourseOutcome, BL=BLOOMS level. Oncompletion oftheLecture/Tutorial/Labonatic, studentsmustbeableto:	CO	BL	Marks per Q
		Module-1			
		IntroductiontoDesign Thinking			
1	1	Describethestagesof Designthinking.	1	1	10
1	2a)	Whatisadesignthinking.Illustrateitsapplications.	1	1	5
1	2b)	Brieflyexplaintheprocessofdesign thinking.	1	1	5
1	3	Discusstheprinciplesof designthinking.	1	1	10
1	4a)	Differentiatedesign,EngineeringdesignandDesign thinking.	1	2	4
1	4b)	Whatismeantbyhuman centereddesignandelaborate with anytwoexamples.	1	1	6
1	5	Describethe5stageStanfordprocessmodelin detail.	1	1	10
1	6	Listanyfour ideation methods and explain.	1	1	10
1	7a)	Illustratethebenefitsof Designthinking.	1	1	5
1	7b)	DiscussthefeaturesofDesignthinking.	1	1	5
1	8a)	Elaboratethe fundamentelements ofdesign—dot,line, shape,	1	1	5
1	8b)	Definedesignthinking.Explainitshistoricaldevelopment.	1	1	5
		Module-2			
		DesignThinkingProcess			
2	1	Summarizethetentoolsofdesignthinking.	2	2	10
2	2	DefineEmpathyindesign thinkingand discuss itstools	2	1	10

2	3	Classify the different techniques in brainstorming and how problems are solved by this.	2	2	10
2	4	Define Empathy map and its use in design thinking. Discuss the process of empathy map.	2	1	10
2	5	Define Brainstorming? Explain its principles and rules.	2	1	10
2	6a)	What is meant by prototype in design thinking?	2	2	5
	b)	Differentiate low-fidelity and high-fidelity prototypes.	2	2	5
2	7a)	Extract the process of design thinking in driving inventions.	2	2	5
2	b)	Design thinking in social innovations.	2	2	5
2	8	Draw and explain the flow diagram to represent the design thinking process for a specific problem.	2	1	10
		Module-3 Innovation			
3	1	Define the heart of innovation and explain how it goes beyond just generating new ideas	3	1	10
3	2	Compare creativity and innovation with examples.	3	2	10
3	3	Discuss the role of leadership, organizational culture, and resource allocation in fostering a creative and innovative workplace.	3	1	10
3	4	a) Explain the role of creativity and innovation in organizational success.	3	1	5
3		b) Describe how can organization transform creative ideas into successful innovations.	3	1	5
3	5	What is value-based innovation. Provide examples of value-driven innovations.	3	1	10
3	6	a) What are the characteristics of high-performing innovation teams?	3	1	5
3		b) How can organizations measure the success of innovation teams?	3	1	5
3	7	Explain the step-by-step process of transforming an initial idea into a successful innovation.	3	1	10
3	8	Evaluate the relationship between value-based innovation and organizational success.	3		10
		Module-4 Product Design			
4	1	Explain the process of problem formation in product design	4	2	10

4	2	Discuss the role of product design in the innovation process	4	2	10
4	3	Describe different product strategies that companies can adopt to achieve competitive.	4	2	10
4	4	Differentiate product innovation and process innovation.	4	2	10
4	5	Discuss the stages of product planning with examples.	4	2	10
4	6	Discuss the importance of setting clear and measurable specifications to ensure product quality and user satisfaction.	4	2	10
4	7	Discuss the role of innovation in product design. Give examples of innovative products and the strategies behind their success.	4	2	10
4	8	Discuss the importance of modeling in product design	4	2	10
		Module-5 Product Design			
5	1	Explain how design thinking redefines business processes with examples.	5	2	10
5	2	Discuss how startups can initiate design thinking for success	5	2	10
5	3	Analyze the challenges businesses face and how design thinking addresses them	5	2	10
5	4	Outline the process of developing and testing business prototypes.	5	2	10
5	5	Discuss the major business challenges that organizations face today.	5	2	10
5	6	How can design thinking be applied to different industries, challenges, and business sectors.	5	2	10
5	7	Explain Business process modeling in detail	5	2	10
5	8	Develop a comprehensive marketing strategy for a startup applying Design Thinking.	5	2	10