SRM Institute of Science and Technology
College of Engineering and Technology
School of Computing

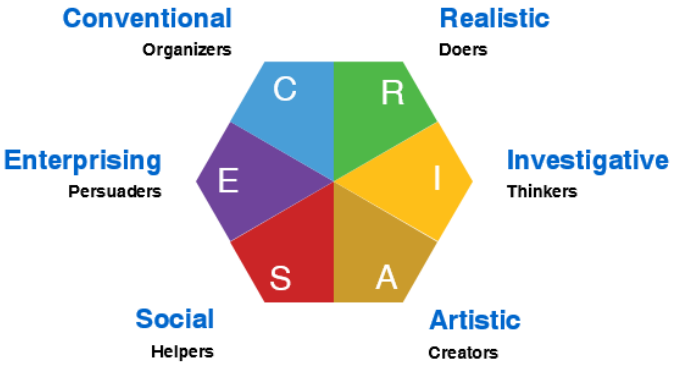
Mode of Exam
OFFLINE

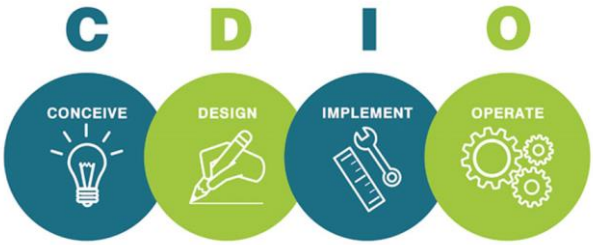
DEPARTMENT OF COMPUTING TECHNOLOGIES
SRM Nagar, Kattankulathur – 603203, Chengalpattu District, Tamil Nadu
Academic Year: 2024 - 2025 - Odd Semester

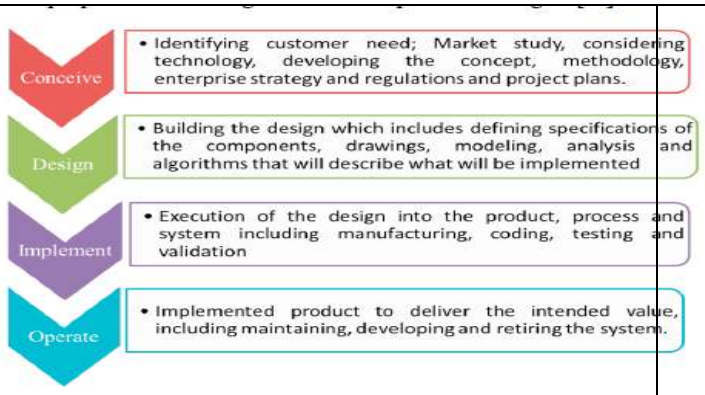
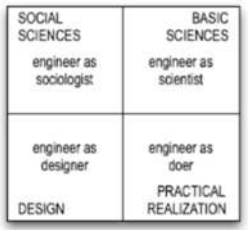
Test: CLAT 2 **Batch 2 – Set C** **Date: 22.11.2024**
Course Code & Title: 21GNH101J Philosophy of Engineering **Duration: 75 Min**
Year & Sem: I Year & I Sem **Max. Marks: 35**
Registration Number:

Part – A
(10 * 1 = 10 Marks)
Instructions: Answer all the Questions

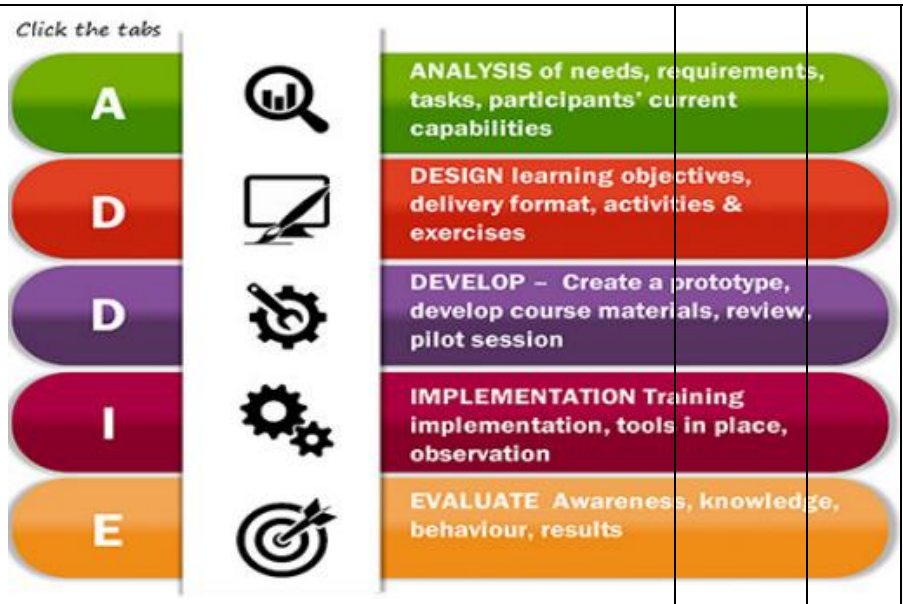
Q. No	Question	Marks	BL	CO	PO
1	Holland's Theory describes _____number of basic personality types. a) 4 b) 5 **c) 6** d) 7	1	1	3	1
2	A division of epistemology which is crucial to develop scientific initiatives is called **a) design epistemology** b) planning epistemology c) activity epistemology d) timing epistemology	1	1	3	1
3	In the context of engineering, what concept is used to derive final and verifiable rigor from apparently unsystematic and random intermediate steps? **a) Abductive reasoning** b) Critical design reviews c) Preliminary design reviews d) Analytical methodologies	1	1	3	1
4	In which quadrant, basic sciences fall-engineer as a) Doer b) Sociologist **c) Scientist** d) Designer	1	1	3	1
5	_____ is creating new tools and devices. **a) Engineering** b) Science c) Physics d) Chemistry	1	1	3	1
6	The prototype creation is involved in _____ phase of Addie model. a) Evaluation phase b) Implementation phase c) Development phase **d) Design phase**	1	1	4	1

7	The course of action that is carried out for checking the stability of individual components and its design is called_____ a) Integration testing b) Derived testing **c) Unit testing** d) Recovery testing	**1**	**1**	**4**	**1**
8	Why is it essential to research ideas and explore possibilities in the design process? a) To delay the project **b) To avoid the problems faced by others** c) To reject potential solutions d) To establish criteria and constraints.	**1**	**1**	**4**	**1**
9	In ADDIE model, 'I' refers to _____ a) Invoice **b) Implementation** c) Investment d) Interest	**1**	**2**	**4**	**1**
10	_____spin-offs or the variations of the "Addie Model" a) Addie model b) Scientific model c) Engineers model **d) Dick and Carey**	**1**	**2**	**4**	**1**
Part – B (1* 10 = 10 Marks) Instructions: Answer any ONE Question					
11	**Elaborate the holland's theory on personality types.** **RIASEC Model**  • **Realistic**: People who enjoy working with their hands, using tools, and engaging in physical activity. Careers in engineering, construction, or athletics are typical for this type. • **Investigative**: Individuals who are analytical, curious, and enjoy solving complex problems. These people often thrive in science, research, and technical fields. • **Artistic**: Creative thinkers who express themselves through art, music, writing, or design. These individuals prefer jobs in the creative industries.	**10**	**2**	**3**	**1**

	• **Social**: Compassionate and helpful individuals who are drawn to teaching, counseling, or healthcare. Social types enjoy working with others and making a positive impact. • **Enterprising**: These people are confident, persuasive, and like to lead. They often excel in business, sales, or management roles. • **Conventional**: Detail-oriented individuals who enjoy structure and organization. Jobs in accounting, administration, or data management typically attract this type.				
12	**Categorize the layers of CDIO and give a brief description of each layer with a suitable diagram.** **<u>CDIO ENGINEERS IN INDUSTRY</u>**  Conceive: • Defining Customer needs • Considering technology • Enterprise Strategy and regulations • Developing Concepts, techniques and • Business Plan Design: • Creating the design • The plans, drawings and algorithms that describe what will be implemented Implement: • The transformation of design into the product, including manufacturing, coding , testing and validation Operate: • Using the implemented product to deliver the intended values, including maintaining, evolving and retiring the system	**10**	**2**	**4**	**1**

					
Part – C **(1* 15 = 15 Marks)** **Instructions: Answer any ONE Question**					
13	**Summarize the significance of the four dimensions of engineering: basic sciences, social sciences, design and practical accomplishment. How do they collectively shape the role of an engineer?** **Solution** **Four dimensions of Engineering** • Engineering as a basic science • Engineering as a Social and Business Activity • Engineering as Design • Engineering as Doing  **1. Engineering as a basic science** • Theory • Model • Method • Publications • Conferences **2. Engineering as a Social and Business Activity** • Negotiation • Team • Value • Customer • Market	**1** **4**	**2**	**3**	**4**

	3. Engineering as Design • Project • System • Integration **4. Engineering as Doing** • Product • Service • Masterpiece (ex-Palm Island)				
14	**Priya is a senior software engineer in a multinational company who works in a U.S. military project. She has chosen ADDIE model for her software development. Explain the ADDIE model with its phases and suggest your views of modifying the phases of the same model with reasons.** **Solution** The ADDIE model is the generic process traditionally used by instructional designers and training developers**.** The five phases—Analysis, Design, Development, Implementation, and Evaluation—represent a dynamic, flexible guideline for building effective training and performance support tools. While perhaps the most common design model, there are a number of weaknesses to the ADDIE model which have led to a number of spin-offs or variations. It is an Instructional Systems Design (ISD) model.. Analysis > Design > Development > Implementation > Evaluation **Diagram**	**15**	**2**	**4**	**4**



Course Outcome (CO) and Bloom's level (BL) Coverage in Questions