

Q.P.Code: 23H50815

R23

H.T.No.

SIDDHARTH INSTITUTE OF ENGINEERING & TECHNOLOGY:: PUTTUR
(AUTONOMOUS)

B.Tech. II Year II Semester Regular & Supplementary Examinations March/April-2026

DESIGN THINKING & INNOVATION

(Common to All)

Time: 3 Hours

Max. Marks: 70

PART-A

(Answer all the Questions 10 x 2 = 20 Marks)

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|-----|--|-----|----|----|
| 1 a | What is Design Thinking? | CO1 | L1 | 2M |
| b | How is Design Thinking different from traditional problem-solving? | CO1 | L1 | 2M |
| c | Define the Empathize stage in Design Thinking. | CO2 | L1 | 2M |
| d | What is the purpose of the Ideate phase? | CO2 | L1 | 2M |
| e | Compare creativity and innovation. | CO3 | L2 | 2M |
| f | How does design thinking contribute to innovation? | CO3 | L1 | 2M |
| g | Define product design and its key components. | CO4 | L1 | 2M |
| h | What factors influence product planning? | CO4 | L1 | 2M |
| i | Why is empathy important in design thinking for business? | CO5 | L1 | 2M |
| j | How does design thinking help businesses solve complex problems? | CO5 | L1 | 2M |

PART-B

(Answer all Five Units 5 x 10 = 50 Marks)

UNIT-I

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|-----|---|-----|----|----|
| 2 a | Explain the primary focus of traditional thinking. | CO1 | L2 | 5M |
| b | How does it differ from the focus of design thinking? | CO1 | L4 | 5M |

OR

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|-----|---|-----|----|----|
| 3 a | Explain the importance of empathy in design thinking. | CO1 | L2 | 5M |
| b | In what ways can designers utilize empathy to develop effective user-centered solutions | CO1 | L3 | 5M |

UNIT-II

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|-----|--|-----|----|----|
| 4 a | List and explain the Design Thinking drive new inventions? | CO2 | L2 | 5M |
| b | Choose some examples of innovative products developed using this approach. | CO2 | L4 | 5M |

OR

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|-----|--|-----|----|----|
| 5 a | Illustrate about Personas in design thinking. | CO2 | L2 | 5M |
| b | Survey the importance of customer journey maps in understanding user experience. | CO2 | L4 | 5M |

UNIT-III

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|-----|--|-----|----|----|
| 6 a | Explain the concept of the art of innovation | CO3 | L2 | 5M |
| b | Demonstrate the key principles of art of innovation. | CO3 | L2 | 5M |

OR

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| 7 a | Define creativity and innovation with suitable examples. | CO3 | L2 | 6M |
| b | Distinguish between creativity and innovation. | CO3 | L4 | 4M |

UNIT-IV

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|-----|---|-----|----|----|
| 8 a | State product design and List out the different types of product strategies | CO4 | L1 | 6M |
| b | Write the key stages in the product design process | CO4 | L3 | 4M |

OR

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| 9 a | Describe innovation drive product design. | CO4 | L2 | 5M |
| b | Identify the key challenges in implementing innovation. | CO4 | L3 | 5M |

UNIT-V

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|------|--|-----|----|----|
| 10 a | Describe the future of design thinking in business and strategic innovation. | CO5 | L2 | 5M |
| b | Analyze how design thinking helps businesses navigate extreme competition and adapt to market changes Provide real-world examples. | CO5 | L4 | 5M |

OR

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|------|--|-----|----|----|
| 11 a | Explain the concept of design thinking. | CO5 | L2 | 5M |
| b | Apply the design thinking process in driving business and strategic innovation | CO5 | L3 | 5M |

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