K. K. Wagh Institute of Engineering Education & Research, Nashik
(An Autonomous Institute From A.Y. 2022-23)

SUMMER-2024	
Exam Seat No.:	
Academic Year:2023-2024	Semester:IV
Class:SY	Program:B.Tech
Branch Code:ELE	Pattern:2022
Name of Course:Design Thinking for Academic Project	Course Code:ELE222015
Max. Marks:60	Duration:2.30 Hrs.

Instructions: Candidates should read carefully the instructions printed on the Question Paper and on the cover page of the Answer Book, which is provided for their use.

1. This question paper contains 02 page(s).
2. Answer to each new question is to be started on a new page.
3. Assume suitable data wherever required, but justify it.
4. Draw the neat labelled diagrams, wherever necessary.
5. The last columns indicates the Course Outcome and level of Blooms Taxonomy of the Question/sub-question.

Question No. 1 Attempt following Question

1	a) List out the characteristics of the academic project. Explain any three.	(6)	CO1

OR

b) Draw the academic project life cycle and explain it.

Question No. 2 Attempt following Question

2	a) Explain Design Thinking and Human-Centered Design Approach	(6)	CO3

OR

b) Describe the ideation phase of design thinking with examples.

Question No. 3 Attempt following Question

3a)	What is a project block diagram? What is the importance of a project block diagram?	(8)	CO2

OR

3b)	What is project methodology? What is the importance of project methodology?	(8)	CO2

3c)	What is the significance of the project plan? How to develop a project plan?	(8)	CO2

OR

3d)	What do you mean by the scope of the project? What points must be considered for defining the project scope?	(8)	CO2

Question No. 4 Attempt following Question

4a)	What is mathematical modeling? Why mathematical modeling is required?	(8)	CO2

<div align="center">**OR**</div>

4b)	What is software modeling or software development? Why software modeling is required?	(8)	CO2

4c)	What is hardware development? Why hardware development is required?	(8)	CO2

<div align="center">**OR**</div>

4d)	What is a literature survey? How to carry out the literature survey?	(8)	CO2

Question No. 5 Attempt following Question

5a)	What do you mean by professional ethics? What are the ethical practices in academic projects?	(8)	CO4

<div align="center">**OR**</div>

5b)	Explain the structure of the project proposal to be submitted to the funding agency or sponsoring agency.	(8)	CO4

5c)	List out the components of the research paper. Explain the process of writing each component.	(8)	CO4

<div align="center">**OR**</div>

5d)	What is IPR? What are the types of IPR?	(8)	CO4

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