



**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) How to make an academic project more meaningful? (6) CO1

OR

- b) Elaborate on the selection of the academic project topic

**Question No. 2 Attempt following Question**

- 2 a) Explain the 4-D model of design thinking (double diamond). (6) CO3

OR

- b) Explain the Empathy 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 do you mean by the scope of the project? What points must be considered for defining the project scope? (8) CO2

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

OR

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

**Question No. 4 Attempt following Question**

4a) What is mathematical modeling? How to model the system mathematically? (8) CO2

**OR**

4b) What is hardware development? How to develop the hardware of the project? (8) CO2

4c) What is software modeling or software development? How to model the system using the software? (8) CO2

**OR**

4d) Why reading is important? What are the types of readings? (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

**OR**

5b) Explain the structure of the project report. (8) CO4

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

**OR**

5d) How to prepare for the national hackathons and project competitions? (8) CO4

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