

JK Lakshmipat University Jaipur
INSTITUTE OF ENGINEERING AND TECHNOLOGY

End Term Examination, May 2025
B. Tech. (Open Elective), Semester VI

Roll No.....

ME1228: System Engineering

Time: 2 hours

Max. Marks: 40

Instructions to students:

1. Do not write anything other than your roll number on question paper.
2. Mention all the assumptions for your answers clearly.
3. You are encouraged to include a simple diagram or pictorial representation to support your explanation wherever appropriate. Diagrams will be credited for clarity and relevance.

- 1 Explain the V-Model used in system development. Discuss its importance in the system life cycle, and describe how it is applied and how it influences the overall progress of a project. 4+6 (LO1,2)
- 2 Why is interface management critical in system design? Describe the different types of interfaces that may be encountered during system development. Additionally, explain the role of a Design Structure Matrix (DSM) in managing these interfaces. 3+4+3 (LO3)
- 3 What is product verification and validation process? Explain with respect to NASA System engine. Identify two key Verification activities and two key Validation activities that would be performed during the development of the electric automobile. 7+3 (LO3)
- 4 Your university is implementing a new online examination system to be used by students and faculty. Define the terms commissioning and operation in the context of a software system. Describe two key activities each in the commissioning and operation phases of the online examination system. Explain why commissioning is a critical step before a software system enters the operational phase. Support your answer with examples. 4+4+2 (LO2,3)

all the best!