# K. K. Wagh Institute of Engineering Education & Research, Nashik

(An Autonomous Institute From A.Y. 2022-23)

| InSem Examination-I Winter2025 | |
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| Exam Seat No.: | |
| Academic Year:2025-2026 | Semester:III |
| Class:PG-II | Program:MBA |
| Branch Code:10 | Pattern:2024 |
| Name of Course:Lean Six Sigma | Course Code:2410614D |
| Max. Marks:30 | Duration:1.15 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 __1___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.
6. Q1 & Q3 are Compulsory.Choose (a) or (b) from Q2 & Q4

| | | Marks | CO |
|---|---|---|---|
| **Question No. 1** | | | |
| 1 a) | Illustrate the concept of COPQ in LeanSix Sigma giving an example. | (3) | CO1 |
| 1 b) | Demonstrate the meaning of Six Sigma with neat graphs and figures. | (4) | CO1 |
| **Question No. 2** | | | |
| 2 a) | Implement DMAIC of Lean Six Sigma to Solve the Problem of “Late Deliveries of Milk to the Grocery Mall” | (8) | CO1 |
| | **OR** | | |
| 2 b) | Sketch the Value Stream Map of a Manufacturing process of the company of your choice along with detail explaination. | (8) | CO1 |
| **Question No. 3** | | | |
| 3 a) | A team has a DPMO of 20,000. They inspect 2,000 units with each unit having 4 opportunities.Calculate how many total defects occurred? | (3) | CO2 |
| 3 b) | Analyze the customer preferences using KANO MODEL with neat graphs. | (4) | CO2 |
| **Question No. 4** | | | |
| 4 a) | Calculate the DPU,DPO,DPMO and YIELD of a telecom network which had a 500 minutes downtime in 2022. (Consider Defect measure as 1 minute of network down). | (8) | CO2 |
| | **OR** | | |
| 4 b) | A project is focused on billing process.The team wants to have correct bills sent to the customer.They have defined one opportunity for this process-either the bill is correct or not.All of the bills produced are the same in terms of complexity.The team took a sample of 250 bills and found 60 defects. Calculate the DPU,DPO,DPMO and Yield. | (8) | CO2 |

**····· End of question paper·····**