

**BIRLA INSTITUTE OF TECHNOLOGY AND SCIENCE, PILANI**  
**First Semester 2023 – 2024**

**Course No:** MSE G521

**Course Title:** World-class Manufacturing

**Date:** 9<sup>th</sup> October 2023

**Max Time:** 90 min

**Max Marks:** 50

**Mid-semester Exam (Closed Book)**

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All questions are compulsory. Assume if any data is required. The new answer should start from a fresh page.

- Q. 1. List the Industrial Revolutions and compare them in terms of operations, tools, management techniques, technology enablers, and market. [8]
- Q. 2. Compare traditional and world-class manufacturing. [8]
- Q. 3. Find the CR value of the given table: [8]

	A	B	C	D
A	1	3	7	9
B	1/3	1	5	7
C	1/7	1/5	1	3
D	1/9	1/7	1/3	1

- Q. 4. Select the car by ELECTRE method for the data given below: [10]

	Cost (in Lakh Rs.)	Speed (in km/hr)
Alternative		
Mercedes Benz	80	200
Jaguar	100	300
Toyota	120	250

- Q. 5. Compare the products and services in terms of Quality Dimensions [8].
- Q. 6. Describe the terms: Cyber-physical systems (CPS), Industrial automation & control systems (IACS), Supervisory control and data acquisition (SCADA), and Industrial Internet. [8]

\*\*\*\*\*good luck\*\*\*\*\*