

Reg No.: \_\_\_\_\_

Name: \_\_\_\_\_

**APJ ABDUL KALAM TECHNOLOGICAL UNIVERSITY**  
Second Semester MBA Degree Examination June 2022 (2020 scheme)

**Course Code: 20MBA108**

**Course Name: OPERATIONS MANAGEMENT**

Max. Marks: 60

Duration: 3 Hours

**PART A**

*Answer all questions. Each question carries 2 marks*

- |  | Marks |
|--|-------|
| 1 What is operations strategy?                   | (2)   |
| 2 Mention the features of fixed position layout. | (2)   |
| 3 State the concept of quality.                  | (2)   |
| 4 Define Master Production Scheduling.           | (2)   |
| 5 What do you mean by lean manufacturing?        | (2)   |

**PART B**

*Answer any 3 questions. Each question carries 10 marks*

- |   |      |
|---|------|
| 6 Differentiate between goods and services with suitable examples   | (10) |
| 7 A pizza delivery service is considering to locate its business in your city. Enlist the factors which this service should take into consideration while locating in your city | (10) |
| 8 Describe Six Sigma process of Japanese manufacturing.   | (10) |
| 9 Narrate the applications of ERP in service industry sector.   | (10) |
| 10 "Industry 4.0 is revolutionizing the way companies manufacture, improve and distribute their products." Justify this statement.  | (10) |

**PART C**

*Compulsory question carrying 20 marks*

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|--|------|
| 11 Analyse the case given below and answer the questions:  | (20) |
| A global construction materials production company was experiencing high failure rates among the bearings on its production lines that used complex grinders and pumps to pulverize and produce cement. Its third-party predictive maintenance solution was ineffective, taking 10 to 20 days to identify anomalies. It implemented an IoT-based system to monitor the condition and |      |

performance of its rotary assets, providing real-time insight into the remaining useful life (RUL) of critical bearings. The solution analyses operational data, and so far, the company experiences a 5% reduction in production downtime and more than 99% availability of critical pumps. The failure rates among bearing was decreased with little integration between operational equipment, IT systems and business units, by using Industry 4.0 technologies, such as Internet of Things (IoT), machine learning and intelligent automation.

**Questions:**

- a) Comment on the relevance of Industry 4.0 in unlocking hidden business values.
- b) How Industry 4.0 technology can be used for cost saving?
- c) How industrial IoT platform, help the company in optimizing production across facilities?

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