NMIMS Centre for Distance and Online Education (NCDOE)

Course: Operations Management

Internal Assignment Applicable for Jun 2026 Examination

Assignment Marks: 30

Instructions

- *All Questions carry equal marks*
- *All Questions are compulsory*
- *All answers to be explained in not more than 1000 words for question 1 and 2 and for question 3 in not more than 500 words for each subsection. Use relevant examples,illustrations as far as possible*
- *All answers to be written individually. Discussion and group work is not advisable.*
- *Students are free to refer to any books/reference material/website/internet for attempting their assignments, but are not allowed to copy the matter as it is from the source of reference.*
- *Students should write the assignment in their own words. Copying of assignments from other students is not allowed*
- *Students should follow the following parameter for answering the assignment questions*

For Theoretical Answer	
Assessment Parameter	**Weightage**
Introduction	20%
Concepts and Application related to the question	60%
Conclusion	20%

For Numerical Answer	
Assessment Parameter	**Weightage**
Understanding and usage of the formula	20%
Procedure / Steps	60%
Correct Answer & Interpretation	20%

PLEASE NOTE: This assignment is application based, you have to apply what you have learnt in this subject into real life scenario. You will find most of the information through internet search and the remaining from your common sense. None of the answers appear directly in the textbook chapters but are based on the content in the chapter

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Q1 A mid-sized manufacturing company experiences an unexpected breakdown of a key machine in its core operations layer during peak production season. The breakdown threatens to delay customer orders and disrupt the transformation process that converts raw materials into finished goods. The operations manager must quickly assess the situation, collect relevant data, and use scientific tools and techniques to analyze the problem. The company has a performance evaluation system in place, but it has rarely been tested under such pressure. The manager is expected to develop an effective and efficient solution to minimize downtime and maintain output levels. Based on the scenario, how should the operations manager apply a systematic approach to address the sudden breakdown of a critical machine on the shop floor, ensuring minimal disruption to the transformation process and continued delivery of outputs?

(10 Marks)

Q2 A bicycle manufacturer produces multiple models, each with different resource requirements and seasonal demand patterns. The operations team is struggling to match production rates with demand, leading to excess inventory at times and stockouts at others. The management is considering different aggregate operations planning strategies—chase, level, and mixed—but is unsure which will best balance cost, flexibility, and customer satisfaction. The finance department is also concerned about the impact of these strategies on working capital and profitability. Evaluate the challenges and opportunities of implementing aggregate operations planning (AOP) in a manufacturing firm that produces a wide variety of products with fluctuating demand. Critically assess the use of chase, level, and mixed strategies, and justify which approach would best address the firm"s operational and financial objectives.

(10 Marks)

Q3 (A) A national retailer is planning to expand its operations by opening new distribution centers across multiple regions. While long-term decisions about facility locations and capacity are underway, the company also faces short-term challenges such as equipment breakdowns, labor shortages, and fluctuating demand. The operations team

needs a planning process that bridges the gap between strategic facility decisions and day-to-day operational control, ensuring both efficiency and flexibility. Develop a strategic operations planning process for a company that must balance long-term facility location decisions with short-term operational control challenges. How would your process integrate forecasting, resource allocation, and real-time feedback to optimize both strategic and tactical outcomes?

(5 Marks)

Q3 (B) An organization with a complex operations structure—comprising customer, core operations, support, innovation, and supplier layers—has found that its current performance metrics are outdated and do not drive desired behaviors or improvements. The management wants a new performance evaluation system that not only measures efficiency and effectiveness at each layer but also encourages cross-functional collaboration and strategic alignment. Design a performance evaluation system for a multi-layered operations system that includes customer, core operations, support, innovation, and supplier layers. How would your system ensure continuous improvement and alignment with organizational goals across all layers?

(5 Marks)

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