

Manufacturing
Planning
Control

I N D E X

BG/K/TX

Reg. No: 21BME0075



VIT

Vellore Institute of Technology

Final Assessment Test – November 2024

Course: BMEE305L - Manufacturing Planning and Control

Class NBR(s): 3902

Time: Three Hours

Slot: B1+TB1

Max. Marks: 100

- KEEPING MOBILE PHONE/ANY ELECTRONIC GADGETS, EVEN IN 'OFF' POSITION IS TREATED AS EXAM MALPRACTICE
➤ DON'T WRITE ANYTHING ON THE QUESTION PAPER

General Instructions:

- Calculator is not needed
- Reference tables are not needed
- Write neatly and do not write unnecessary
- Provide neat diagram while answering for each question

Answer ALL Questions
(10 X 10 = 100 Marks)

1. Compile and construct points for the following:
(i) various activities related to production system designing.
(ii) various activities related to analysis and control of production.
2. In your perspective, what constitutes an effective operational strategy (OS)? Discuss the various effective OS approaches.
3. Give an example and a clean sketch to illustrate the architecture of different modular design slots.
4. Describe the distinctions between product and service design. Describe the various stages of the service design process as well.
5. Formulate the relationship that exists between four process strategies and volume and variety.
6. Tabulate and elaborate the ways in which the various service sectors are affected by the rapid advancements in technology, with examples.
7. An Automobile giant is planning to build an efficient and responsive supply chain. Explain their challenges, tools available and strategy to build it critically.
8. How does the bull-whip effect occur and what is the supply chain structure that causes it?
- 9.a) "Implementation of a lean system is vital for a successful enterprise". Justify this point. Also list the typical characteristics exhibited of lean systems.
- OR
- 9.b) "Inventory is critical for an industry. Hence this has to be better managed and controlled". Do you agree or disagree with the statements? Justify your stand. Explain in detail.
- 10.a) What options do operations managers have when handling a bottleneck operation? Out of these, which one doesn't shorten throughput time?
- OR
- 10.b) Describe why increasing a bottleneck's capacity might not increase the system's capacity.

⇔⇔⇔ BG/K/TX ⇔⇔⇔