

Revise / Review

Test 1 Prep

# Test 1 Introduction

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- The test is worth 100%

(60% from 20 MCQ in Part A and 40% from open ended Essay questions in Part B )  
and the duration of the Test is total 3 hours.

- Read the questions and the instructions carefully (make sure you have understood the question that is being asked). With open ended questions use detailed explanation when answering your questions.
  - No communication is allowed during the test.
  - This is a closed book test no materials are allowed.

Good luck!!

1. “The concept of ..... is central to understanding the behaviour of queues. If there were no ..... there would be no need for queues to occur because the capacity of a process could be relatively easily adjusted to match demand.

a) work in process

b) idle time

c) variability

d) Volume

2. What kind of process configuration is described in the paragraph below?

“With this kind of process configuration we achieve a higher mix flexibility. If the process needs to produce several types of product or service, each stage could specialise in different types. We also potentially achieve higher volume flexibility. As volume varies, stages can simply be closed down or started up as required.”

a) a short-fat configuration

b) a long-thin configuration

3. In'n'Out offers a very quick turnaround to customers who buy its car maintenance services. High levels of performance at the 'speed' objective also results in other benefits (or dis-benefits) to In'n'Out:

a) speed comes at a price, and cost performance is reduced.

b) speed reduces need to manage transformed resources as they pass through the operation: in turn reducing cost.

c) speed helps to overcome internal problems by forcing attention to internal dependability.

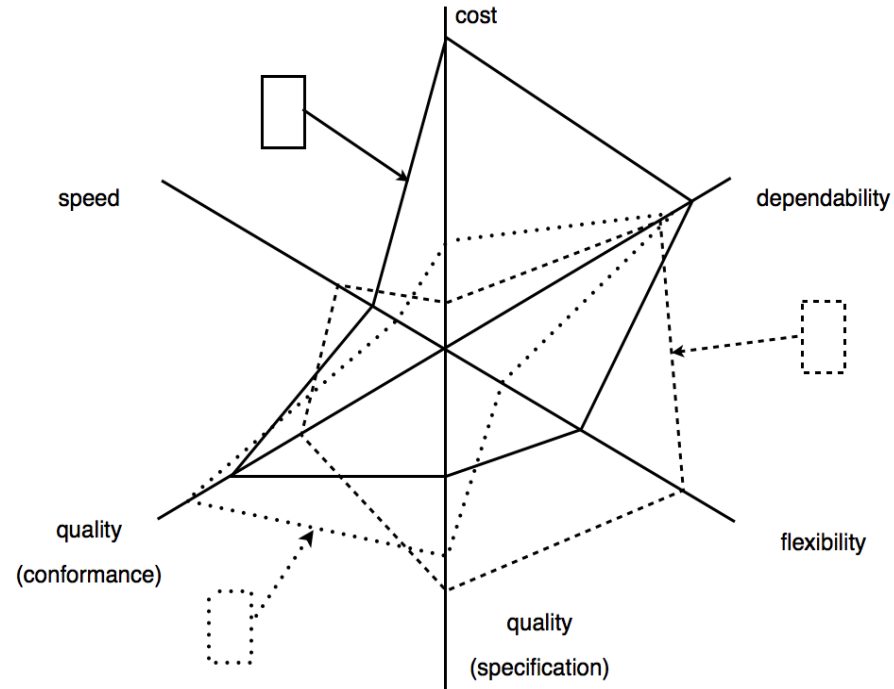
d) speed helps to increase mix flexibility.

**A) Conference bags** - usually shoulder bags with space for conference paperwork. The bags are made from thin nylon and while reasonably robust, are not meant to last very long and must be delivered to a conference venue on time.

**B) Bespoke luggage.** On the company's website customers can choose from a range of "modules", fabrics, straps etc to design their ideal bag. Such customisation does not come cheap.

**C) Special Forces Packs** – supplying bags to the military in UK. Simple design but very robust

LABEL THE DIAGRAM WITH A, B AND C



Answer is A top left box, B right box and C bottom box

7. For a given level of capacity utilisation, increasing the variation in processing rates should help reduce the average number of units waiting to be processed.

a) True

b) False

8. Capacity is measured either by ..... or by .....

A. the volume of output or by input produced

B. the volume or by variety

C. The volume of input ... (or by)... the output produced

D. None of the options are correct

9. The “Lettuce Harvesting” discussion in the class was an illustration of a mass/batch process using a fixed position layout.

a) True

b) False

10. Consider the following conditions:

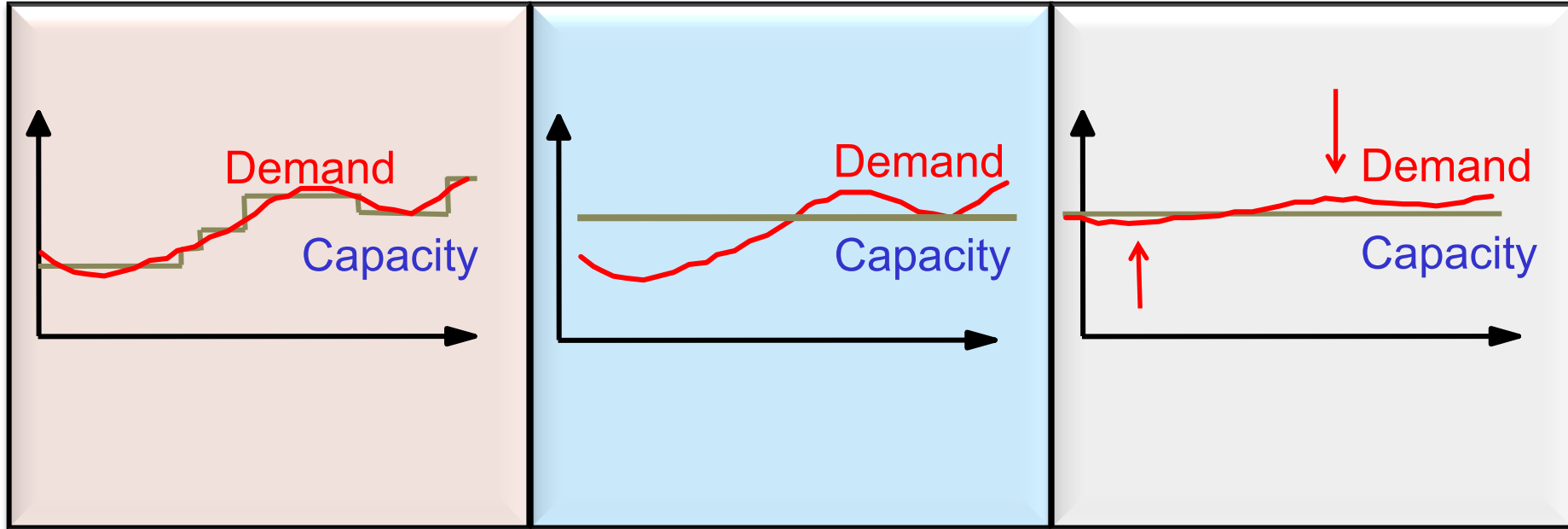
- The temporary malfunction or breakdown of process technology within a stage of the process.
- The necessity for recycling 'mis-processed' materials, information or customers to an earlier stage in the process.
- The misrouting of material, information or customers within the process that then needs to be redirected.
- Slight differences in the physical coordination and effort on the part of the person performing the task.

All of above are cause factors resulting in:

- a) Reduced quality specification.
- b) A decrease in operations costs.
- c) A reduction in operations flexibility.
- d) An increase in operations variability.



# Identify the three capacity management strategies



A. ?

Chase

B. ?

Level

C. ?

Demand Mgt

# Inventory

14. Complete the following:

..... slows throughput in processes, operations and supply networks. While something [or someone!] is ..... it is not progressing, or [usually] having value added to it. There is therefore a direct connection between high ..... and long throughput times.

15. 'Chase demand' capacity plans can achieve the objectives of stable employment patterns, high process utilisation, and usually also high productivity with low unit costs.

a) True

b) False

# Part B

1. What are the factors that influence process and layout types? Give examples for each of the process and layout type to discuss how do they associate together.
2. Identify and discuss a general 4Vs profile indicating the ranges of high to low for two different product lines from the same company.

Thank you!

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