



<u>FACULTY:</u>	Faculty of Engineering and Built Environment.
<u>DEPARTMENT:</u>	ACADEMIC SUPPORT UNIT
<u>CAMPUS:</u>	DFC
<u>MODULE:</u>	BPJ1AY1 OPERATIONS MANAGEMENT 1A
<u>SEMESTER:</u>	SECOND
<u>EXAM:</u>	8 JANUARY 2020

DATE: 8 JANUARY 2020 **SESSION:** 11h:30- 13h:30

ASSESSOR(S): Ms. N.E NWOBODO-ANYADIEGWU

MODERATOR: Mr. E. BAKAMA

DURATION: 2 Hours **MARKS:** 100

NUMBER OF PAGES: 4 PAGES

INSTRUCTIONS TO CANDIDATES:

- Answer ALL questions.
- This is a closed book assessment.
- Leave margins and spaces between the questions.
- Show **all** your calculations.
- Unless otherwise indicated, express your answers correct to **two (2) decimal** places.
- Where appropriate, indicate the units of your answer. (e.g. Hour, R)
- Number your answers clearly.
- Write neatly and legibly
- NOTE: Marks are awarded for theoretical knowledge, application of the theory and use of relevant examples.

The general University of Johannesburg policies, procedures and rules pertaining to written assessments apply to this assessment.

SECTION A [80]**QUESTION 1** [30]

1.1 Identify the three factors that are critical to the development of a Company's business strategy; explain exhaustively the relevance of each of these factors in the development of a named company's business strategy. (12)

Note: provide one example for each factor.

1.2 Discuss four important elements for improving labour productivity. (8)

1.3 Mr. Tlala, the local auto mechanic, finds that it usually takes him 2 hours to diagnose and fix a typical problem. What is his daily productivity (assume an 8 hours day)? Tlala believes he can purchase a small computer trouble-shooting device, which will allow him to find and fix a problem in the incredible (at least to his customers!) time of 1 hour. He will, however, have to spend an extra hour each morning adjusting the computerized diagnostic device. What will be the impact on his productivity if he purchases the device? Did the productivity increase? Justify your answer. (5)

1.4 Randpark cleaning company cleaned 65 houses in during spring in September 2019, consuming the following resources:

Chemicals: 100 litres at R5 per litre

Labour: 520 hours at R13 per hour

Machine rental: 20 days at R50 per day

1.4.1 What is the labour productivity per Rand? (2)

1.4.2 What is the multifactor productivity? (3)

QUESTION 2 [20]

2.1 What is globalization of businesses? (5)

2.2 Discuss five advantages of globalization. (10)

2.3 Provide five sources of risk associated with globalization. (5)

QUESTION 3 [20]

3.1 Identify five tactics for matching capacity to demand. Options of adjusting capacity. (10)

3.1 Provide four features that characterise a product in the maturity phase of its life cycle. Use a product to illustrate. (5)

3.3 Provide five features that characterise a product in the declining phase of its life cycle. Why would a company continue to produce a product in the declining phase of its life cycle? (5)

QUESTION 4**[10]**

Write exhaustive notes on any **two** of the following:

- External failure cost
- Quality circle
- Contribution of Walter Shewhart to Quality

Five marks each.

SECTION B**[20]****Answer True or False**

1. A 'House of Quality' is achieved when no department in a single location has more than 15% rejects.
2. Concurrent Engineering is another term for sequential development.
3. One of the main advantages of standardization is that it increases the potential variety of products.
4. A disadvantage of standardization is the possibility of standardizing designs too early, which may make it difficult to modify in the future.
5. Reducing consumer choices makes service more efficient.
6. Modular design increases costs of purchasing and controlling inventory compared to non-modular.
7. Product failures can be easier to remedy with modular design.
8. One motivation for an organization to redesign its product or service is to avoid the alternative of downsizing the organization.
9. A major benefit of Computer Aided Design (CAD) is the increased productivity of designers.
10. The term capacity refers to the minimum quantity an operating unit can process.
11. Capacity decisions are usually one-time decisions, once they have been made; we know the limits of our operations.
12. Stating capacity in Rand amounts generally results in a consistent measure of capacity regardless of

the actual units of measurement.

13. Design capacity refers to the maximum output that can possibly be attained.
 14. Increasing productivity and quality will result in increased capacity.
 15. Cost and competitive priorities reduce effective capacities.
 16. An example of an external factor that influences effective capacity is government safety regulations.
 17. The maximum possible output given a product mix, production problems, quality factors, and so on, is _____
 18. Basic questions in capacity planning are _____, _____, _____ (3)
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TOTAL MARKS

[100]

END OF ASSESSMENT