



Requirements for this paper/Benodighede vir hierdie vraestel:				Resources/Hulpmiddels:
Answer Scripts/ Antwoordskrifte:		Multi-choice cards (A4)/ Multikeusekaarte (A4)		
Attendance Slips (Fill-in Paper)/ Presensiestrokies (Involvraestel):		Graph Paper/ GrafiekPapier		
Scrap Paper/ Rofwerkpapier		Calculators/ Sakrekenaars		
Multi-choice cards (A5)/ Multikeusekaarte (A5)		Laptop (Power not provided)/ Skootrekenaar (Krag word nie voorsien nie)		

Type of Assessment/
Tipe Assessering:

Duration/
Tydsduur:

Paper Number/
Vraestel Nommer:

Maximum Marks/
Maksimum Punte:

Module Code/
Modulekode:

Module Description/
Module Beskrywing:

Examiner(s)/
Eksaminator(e):

Date/
Datum:

Internal/Interne
Moderator(s):

Time/
Tyd:

External Moderator(s)/
Eksterne Moderator(s):

Qualification/
Kwalifikasie:

Submission of answer scripts/Inhandiging van antwoordskrifte:

VRAAG 1 / QUESTION 1**[4]**

Produktiwiteit kan op verskillende maniere gemeet word, soos arbeid, kapitaal, energie, materiaalverbruik, ensovoorts. SUNLO produseer appelkratte wat aan appelboere verkoop word. Tans produseer hulle 10 000 kratte binne 250 uur. Hulle voel dat as hulle nuwe toerusting koop, hulle produktiwiteit kan toeneem. Met die nuwe toerusting kan hulle 15 000 appelkratte in 250 uur produseer. Bewys deur berekeninge dat hul produktiwiteit toegeneem het.

VRAAG 2**[10]**

ANCO produseer hoë koste-juweliersware van uitstaande gehalte. Die produksieproses is eenvoudig, hoewel hulle hoë koste toerusting gebruik om die juweliersware te vervaardig. Hulle is in Potchefstroom in die River Walk sentrum geleë. Die uitleg van die produksieproses is nie ingewikkeld nie. Daar is net 3 mense wat vir hierdie onderneming werk, maar elkeen is 'n spesialis in hul spesifieke komponent van die proses. Hulle investeer baie geld in voorraad om seker te maak dat die produksieproses vloei. Die produksieproses word ontwikkel volgens 'n baie spesifieke skedule en hulle diens die toerusting gereeld om produksievloei te verseker. Gebruik die tien strategiese operasionelebestuursbesluite en verduidelik hoe elk van hierdie besluite ANCO Juweliers 'n mededingende voordeel sal gee.

VRAAG 3**[8]**

Lees die gevallestudie oor die Arnold Palmer-hospitaal op bladsy 252 -253. Verduidelik hoe die Arnold Palmer-hospitaal die vier hoofkategorieë van koste verbonde aan kwaliteit (Koste van Gehalte) kan gebruik om hul mededingende posisie in die mark te verbeter.

VRAAG 4**[6]**

PITSO Ingenieurswerke wil sommige van hul toekomstige operasionele bedrywighede in detail beplan. Hulle voer 'n sommige van hul onderdele uit die Verenigde State van Amerika in. Hulle is ook baie sensitief vir die rentekoers in Suid-Afrika omdat hulle baie geld geleen het vir toekomstige uitbreiding. Hulle gebruik verder baie opgedateerde tegnologiese toerusting in hul produksieproses. Hulle is ook relatief seker dat hulle in die kol is met die aanvraagvoorspellings vir ten minste die volgende tien jaar. Gebruik die soorte voorspellings en adviseer hulle oor of dit 'n invloed op hul voorspellings vir die volgende tien jaar kan hê.

VRAAG 5**[7]**

'n Goed uitgevoerde "*Lean*"- program vereis 'n betekenisvolle verhouding tussen die koper en verskaffers. Die Arnold Palmer hospitaal werk aan op 'n "*Just in Time*" (JIT) verhouding met hul verskaffers, sowel as in die hospitaal self. Gee praktiese voorbeelde van hoe die JIT-tegnieke gebruik kan word om hulle te help om vinniger te reageer op die verbruiker se behoeftes teen 'n laer koste en 'n hoër gehalte

VRAAG 6 / QUESTION 6**[5]**

By die opstel van 'n gesamentlike plan moet die operasionele bestuurder verskeie vrae beantwoord. Die antwoorde op al hierdie vrae kan die manipulasie van voorraad, produksiekoerse, arbeidsvlakke, kapasiteit en ander beheerbare veranderlikes insluit. Sommige van hulle word kapasiteit-opsies genoem, omdat hulle nie die vraag probeer verander nie, maar probeer om vraagskommelings te absorbeer. 'n Onderneming kan kies uit verskeie basiese kapasiteit (produksie)-opsies. Gee praktiese voorbeelde van hoe hierdie kapasiteit-opsies gebruik kan word om die onderneming mededingend te maak.

VRAAG 1

[10]

Sam Casey probeer om 'n voorraad analise van een van sy produkte uit te voer. Die jaarlikse vraag na hierdie produk is 275 000 eenhede, met 'n eenheidsprys van R20, drakoste van 10% van die eenheidsprys, en die bestelkoste beloop R150 per bestelling. Die gewenste veiligheidsvoorraad is 5 500 eenhede. Die leweringstyd is ses (6) dae. Aanvaar dat hulle 45 weke per jaar, vyf dae per week, verhandel.

Gegewe die bogenoemde inligting, bereken die volgende:

- 1.1 Wat is die mees ekonomiese bestelhoeveelheid (MEB)? **Bestellings moet in ronde lotte van 10 eenhede geplaas word.** (3)
- 1.2 Herbestelpunt. (2)
- 1.3 Gemiddelde voorraadvlak. (3)
- 1.4 Optimale aantal bestellings per jaar. (2)

VRAAG 2 / QUESTION 2

[10]

Teken 'n aktiwiteit op nodus-netwerkdigram om die volgende afhanklikes voor te stel.

Aktiwiteite	Direkte voorganger
A	I,J
B	A
C	B
D	B
E	C,D
F	-
G	F
H	F
I	H
J	G

TOTAAL: 100

SECTION B: DISCUSSION QUESTIONS**[40]****QUESTION 1****[4]**

Productivity can be measured in a variety of ways, such as labour, capital, energy, material usage, and so on. SUNLO produces apple crates sold to apple farmers. Currently they produce 10 000 crates in 250 hours. They feel that if they buy new equipment their productivity can increase. With the new equipment they can produce 15 000 apple crates in 250 hours. Proof by means of calculations that their productivity has increased.

QUESTION 2**[10]**

ANCO is producing high cost jewellery that is of exceptional quality. The production process is simple although they use high cost equipment to produce the jewellery. They are located in Potchefstroom in the River walk Mall. The layout of the production process is not complicated. There are just 3 people working for this company, but each is a specialist in their specific component of the process. They invest a great deal of money in inventory to make sure the production process is flowing. The production process is developed according to a very specific schedule and they maintain the equipment on a regular basis to ensure production flow. Use the ten strategic operations management decisions and explain how each of these decisions will give ANCO Jewelleries a competitive advantage.

QUESTION 3**[8]**

Read the case study on the Arnold Palmer Hospital on page 252 -253. Explain how the Arnold Palmer Hospital can use the four major categories of cost associated with quality (Cost of Quality) to improve their competitive position in the market.

QUESTION 4**[6]**

PITSO Engineering wants to plan some of their future operations in detail. They are importing some of their parts from the United States of America. They are also very sensitive for the interest rate in South Africa because they had borrowed a lot of money for future expansion. They further use very updated technological equipment in their production process. They are also relatively sure that they are on target in their demand forecasts for at least the next ten years. Use the types of forecasts and advise them how it may have an influence on their predictions for the next ten years.

QUESTION 5**[7]**

A well-executed Lean program requires a meaningful buyer-supplier partnership. The Arnold Palmer Hospital is working on a Just in Time (JIT) relationship with their suppliers as well as in the hospital itself. Give practical examples of how the JIT techniques can help them to respond faster to customers' needs at a lower cost and a higher quality.

QUESTION 6**[5]**

When generating an aggregate plan, the operations manager must answer several questions. The answers to all of these questions can involve the manipulation of inventory, production rates, labour levels, capacity, and other controllable variables. Some of them are called capacity options because they do not try to change demand, but attempt to absorb demand fluctuations. A firm can choose from several basic capacity

(production) options. Give practical examples of how these capacity options can be used to make the business more competitive.

SECTION C: CASE STUDY

[20]

QUESTION 1

[10]

Sam Casey is attempting to perform an inventory analysis on one of his products. The annual demand for this product is 275 000 units, with a unit price of R20, carrying cost of 10% of the unit price, and ordering costs are R150 per order. The desired safety stock is 5 500 units. The lead time will be six (6) days. Assume that they trade for 45 weeks per annum, five days per week.

Given the above information, calculate the following:

- 1.1 What is the most economic order quantity (EOQ)? **Orders must be placed in round lots of 10 units.** (3)
- 1.2 Re-order point. (2)
- 1.3 Average inventory level. (3)
- 1.4 Optimal number of orders per year. (2)

QUESTION 2

[10]

Draw an activity on node diagram to represent the following dependencies.

Activities	Immediate predecessor /
A	I,J
B	A
C	B
D	B
E	C,D
F	-
G	F
H	F
I	H
J	G

TOTAL: 100

File reference: 8.1.7.2.2