MNO3701

MAY/JUNE 2020

PRODUCTION AND OPERATIONS MANAGEMENT

STUDENT NUMBER									

IDENTITY NUMBER												

COMPLETE YOUR PERSONAL INFORMATION ON THIS PAGE

Question No	Marks					
	Examiners					
	1		2		3	
1						
2						
3						
4						
5						
6						
Total						

Module : MNO3701

Production and operations management

Number of paper : 01

May / June 2020 Portfolio assessment

Date of examination : 6 July 2020 (24H)

Released: 6 July 2020 (10:30 GMT+2)

Due: 7 July 2020 (10:30 GMT+2)

UNIVERSITY EXAMINATIONS

May/June 2020

MNO3701

PRODUCTION AND OPERATIONS MANAGEMENT

70 Marks
Duration 24 Hours

EXAMINERS:
PROF AS TOLMAY (FIRST)
DR AP AMADI-ECHENDU (SECOND)
MR J VENTER (EXTERNAL)

This paper consists of 9 pages.

Instructions:

1) The aim of this portfolio is to test your knowledge of the key learning outcomes of this module.
2) You need to answer all the questions.
3) You need to download the portfolio template from myUnisa and save document "**MNO3701_Portfolio_MayJune2020_Student_number_Initials_Surname**" by changing the file name to reflect your own details.
4) Portfolios should be typed in Arial size 12, 1.5 line spacing. (However, exemptions will be made for hand written portfolios - provided it is submitted in PDF).
5) The typed portfolio should be converted to a PDF document.
6) Although it is strongly suggested that you type your responses to this assessment, you may submit handwritten assessments by printing this document, completing it by hand, scanning it in and uploading it onto myUnisa (PDF format).
7) No extension can be granted on this portfolio as it constitutes an examination.
8) Take note of the mark allocation for each question. Th is will give you an indication of the number of facts that should be discussed.
9) The assessments will not be returned to you and the examination department will inform you of results.
10) Submit this portfolio electronically via myUnisa.
11) ONLY SUBMIT ONE FILE (only one file is accepted on the system).
12) Please try to submit portfolio before the 24hour period expires.
13) You are welcome to contact your lecturer via email should you require guidance regarding the completion of this portfolio. You can reach Prof Alet Tolmay at etolmaas@unisa.ac.za.

How to submit your answer file:

Follow these steps to submit your answer file.

PLEASE CHECK MYUNISA (ANNOUNCEMENTS) FOR TEMPLATES TO COMPLETE THE PORTFOLIO

1. Access myUnisa at https://my.unisa.ac.za/portal and login using your student number and myUnisa password
2. Click on the "myAdmin" tab in the top navigation
3. Click on "Assessment Admin"
4. Click on "Assignments Submission"
5. Locate the section titled May/June Online Exams
6. Locate MNO3701 and Click on ">>open in new window" and follow the instructions

Step 1: Load the answer file from your PC to myUnisa

1. Click on the Browse button next to File Name
2. In the Choose File dialog box, select the file you want to upload, and then click OK
3. Select the correct file format from the File Format drop-down list. Most modules only allow PDF formatted files to be uploaded.
4. Click on the Continue button.

Step 2: Verify the file details for final submission of your answer file

1. Use this step to verify that you are uploading the correct answer file to the correct course and assessment number.
2. Click on the Continue button to submit your answer file. If you do not click Continue, no submission action will take place.
3. Large files will take longer to upload than smaller files. Please be patient after you've clicked Continue.
4. If the wrong details, e.g. file name, appear on the screen, click Back to restart the file upload process.

Step 3: Assessment submission report

1. This is your proof that your take-home answer file was submitted. It is advisable to print this page or make a screen capture for record purposes. A copy of this page will also be emailed to your myLife email account.
2. Who do I contact if I am experiencing any problems completing or uploading this portfolio?
3. If you require guidance regarding the completion or upload of this portfolio, or if you experience any problems on the day of the examination, please contact your lecturer, Prof A Tolmay, via email, on etolmaas@unisa.ac.za

NO EXTENSIONS WILL BE GRANTED ON THE SUBMISSION OF THIS PORTFOLIO

COMPLETE ALL 5 QUESTIONS

Templates are posted on 'announcements' (MyUnisa).

[15]

Question 1

Corporate social responsibility comprises five dimensions applicable to operations management. You are the operations manager of a large organisation in the current Covit-19 pandemic. Critically present and explain all five dimensions, and provide examples how these dimensions will be applied through your organisation in the current Covit-19 environment, and provide practical examples.

[10]

Question 2

Read the background information on Shoprite Holdings (Pty) Ltd and answer the question following.

Shoprite Holdings (Pty) Ltd

Our Group

We are the largest supermarket retailer on the African continent. We are a business with over 147 000 employees, thousands of stores and a network of distribution centres across 15 countries. We serve local communities with the lowest price promise. 35 million people shop in our footprint of more than 2,998 outlets every day.

Our Customers

Our 35 million customers have played a large role in our company becoming Africa's largest supermarket retailer. We regard them as members of our families, our neighbours and our friends.

We want to offer our customers exceptional service and make sure they leave our stores satisfied - this is our unwavering commitment.

Drivers of Our Long Term Success

We believe that the drivers of our past successes position us for future growth in Africa and beyond.

A combination of controlling our own supply chain, investing in employee skills, investment in infrastructure, as well as value added services to compliment the shopping experience is our recipe for success.

Source:
https://www.shopriteholdings.co.za/

Risk management is about identifying things that could go wrong, preventing things from going wrong, minimising the consequences when things do go wrong and recovering after things have gone wrong. Hence, the aim of risk management is to prevent failures. The majority of failures are caused by something that could have been avoided.

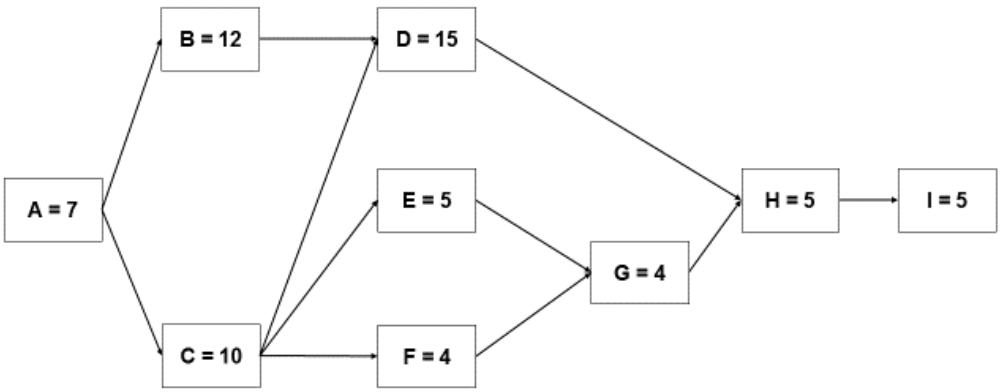
You are the operations manager of Shoprite Holdings (Pty) Ltd. Your task is to present possible courses of failures within Shoprite Holdings (Pty) Ltd to the board of directors. Present and explain five (5) potential causes of failures (for supermarket retailers) and provide examples of each to the board of directors.

[20]

Question 3

Mpho Nkosi Distribution (Pty) Ltd is implementing a project that comprises the activities indicated in the table below.

Activity	Duration of activity (days)	Predecessor
A	7	-
B	12	A
C	10	A
D	15	B, C
E	5	C
F	4	C
G	4	E, F
H	5	D, G
I	5	H



The critical path method (CPM) network is presented above. Complete the early start (ES), early finish (EF), late start (LS) and late finish (LF) for activities B, D, F, H and I in the table below.

	ES	EF	LS	LF
Activity B				
Activity D				
Activity F				
Activity H				
Activity I				

[14]

Question 4

Different process designs are applicable for different circumstances within production and operations management. Identify seven (7) process designs and critically explain what each means. Provide examples of companies or industries for each applicable process design.

[5]

Question 5

Mzanzi (Pty) Ltd manufactures needles, which are subjected to a bend test. The company uses statistical process control (SPC) and plots the results (measured in grams) on a chart.

4.1 If the process average is 26,1 and the average range is 4, what will the control limits be if the sample size is n = 9? The factor for the calculation of the control limits is 0,34 for sample size n = 9. Calculate the UCL and LCL on a separate paper and present only the values below.

4.2 Interpret whether an investigation into an assignable cause should be undertaken, given that one sample average is 26,08.

UCL	
LCL	
Should an investigation be undertaken? (Yes or No)	

[6]

Question 6

The inventory record (item master file) for screwdriver handles shows the following planning factors: batches are set at quantities of 20, safety stock is set at five handles, the available inventory is 60 and the lead time for orders is two weeks.

Item	Week				
	1	**2**	**3**	**4**	**5**
2 mm 7 mm Star 5	12 8 10	 20	 16 4	24 16	 2
MPS	30	20	20	40	2

Populate the table below:

	Week					
	0	**1**	**2**	**3**	**4**	**5**
Gross required		30	20	20	40	2
Available inventory	60					
Planned order						

[Total = 70 marks]

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