



UTM
UNIVERSITI TEKNOLOGI MALAYSIA

School of
Professional and
Continuing
Education
(SPACE)

**ASYNCHRONOUS FINAL EXAMINATION / PEPERIKSAAN AKHIR ASYNCHRONOUS
SEMESTER I – SESSION 2020/2021
PROGRAM KERJASAMA**

COURSE CODE : DDWG 2223
KOD KURSUS

COURSE NAME : INTRODUCTION TO OPERATION MANAGEMENT
NAMA KURSUS : PENGENALAN KEPADA PENGURUSAN OPERASI

YEAR / PROGRAMME : 2DDWG
TAHUN / PROGRAM

DURATION : 3 HOURS / 3 JAM
TEMPOH

DATE : NOVEMBER 2020
TARIKH

INSTRUCTION / ARAHAN:

1. Answer **ALL** questions and write your answers on the answer sheet.
*Jawab **SEMUA** soalan dan tulis jawapan anda pada kertas jawapan.*
2. Write your name, identity card no., course code, course name and college name in the upper left corner of the answer sheet.
Tulis nama anda, no. kad pengenalan, kod kursus, nama kursus dan nama kolej di penjuru atas kiri kertas jawapan.
3. Each answer sheet must have a page number written at the bottom right corner.
Setiap helai kertas jawapan mesti ditulis nombor muka surat pada bahagian bawah penjuru kanan.
4. Answers should be handwriting, neat and clear.
Jawapan hendaklah ditulis tangan, kemas dan jelas menggunakan huruf cerai.

This examination paper consists of **11** pages including the cover.
*Kertas soalan ini mengandungi **11** muka surat termasuk kulit hadapan.*

INSTRUCTION: ANSWER ALL QUESTIONS

[60 MARKS/MARKAH]

[ARAHAN : JAWAB SEMUA SOALAN]

Q1. A centralised supply chain planning strategy concerns common and standardised processes and working methods (Rudberg and West, 2008), centralised organization (Marcotte et al, 2009), and an integrated IT infrastructure with advanced planning and scheduling (APS) support (Jonsson et al, 2007), and may result in benefits, such as improved transparency, visibility and synchronised processes (Dreyer et al., 2009). Coordinating and managing a supply chain through centralised planning is, however, not a general solution and research identifies different prerequisites for effective centralised planning (Holmström et al., 2002; Rudberg and Olhager, 2003). Even though the right prerequisites for centralised supply chain planning exist, its implementation may result in problems or there may exist obstacles for its full implementation. Identified problems of centralised planning, for example, include incongruence of objectives and incentives of individual organizations that result in fragmented global supply chains (Pibernik and Sucky, 2007; Lorentz, et al., 2012). Most research on supply chain planning has studied individual process or organizational or IT perspectives, but few have used an integrated perspective to study all three and their effects (Power, 2005). Such an approach should be especially helpful for generating understanding of centralised supply chain planning effects and obstacles in complex supply chains (Bozarth et al., 2009) like IKEA's, which has about 30,000 sales items, 1,400 suppliers, 30 central distribution centres and 280 stores globally.

Supply chain planning in the retail sector has been studied before (Wong et al., 2005), but not in a supply chain of the same magnitude as IKEA.

Strategi perancangan rantaian bekalan terpusat memfokus pada proses dan kaedah kerja yang biasa dan standard (Rudberg dan West, 2008), organisasi berpusat (Marcotte et al, 2009), dan infrastruktur IT bersepadu dengan sokongan perancangan dan penjadualan (APS) yang maju (Jonsson et al , 2007), dan boleh menghasilkan faedah, seperti peningkatan ketelusan, penglihatan dan proses yang diselaraskan (Dreyer et al., 2009). Menyelaras dan menguruskan rantaian bekalan melalui perancangan terpusat, bagaimanapun, bukan penyelesaian umum dan penyelidikan mengenal pasti prasyarat yang berbeza untuk perancangan terpusat yang berkesan (Holmström et al., 2002; Rudberg dan Olhager, 2003). Walaupun prasyarat yang tepat untuk perancangan rantaian bekalan terpusat ada, pelaksanaannya dapat mengakibatkan masalah atau mungkin ada halangan untuk pelaksanaannya sepenuhnya. Masalah yang dikenal pasti dari perancangan berpusat, misalnya, merangkumi ketidaksesuaian objektif dan insentif organisasi individu yang mengakibatkan rantaian bekalan global yang berpecah (Pibernik dan Sucky, 2007; Lorentz, et al., 2012). Sebilangan besar penyelidikan mengenai perancangan rantaian bekalan telah mengkaji perspektif proses individu atau organisasi atau IT, tetapi hanya sedikit yang menggunakan perspektif bersepadu untuk mengkaji ketiga-tiganya dan kesannya (Power, 2005). Pendekatan sedemikian semestinya sangat berguna untuk menghasilkan pemahaman mengenai kesan dan rintangan perancangan rantaian bekalan terpusat dalam rantaian bekalan yang kompleks (Bozarth et al., 2009) seperti IKEA, yang mempunyai kira-kira 30,000 item penjualan, 1,400 pembekal, 30 pusat pengedaran pusat dan 280 kedai di peringkat global. Perancangan rantaian bekalan di sektor runcit telah dikaji sebelumnya (Wong et al., 2005), tetapi tidak dalam rantaian bekalan yang sama besarnya dengan IKEA.

(Extract from/Dipetik daripada :Centralised supply chain planning at IKEA, ResearchGate).

- a. Based on above study, how does supply chain planning can become one of competitive advantage tools? State your answer in line with IKEA's supply chain planning as example.

[Berdasarkan kajian diatas, bagaimanakah perancangan rantaian bekalan boleh menjadi salah satu alat kelebihan persaingan? Nyatakan jawapan anda berdasarkan rancangan rantaian bekalan di IKEA sebagai contoh.] **(10m)**

- b. Build SWOT analysis for IKEA.

[Bina analisis SWOT untuk IKEA.] **(4m)**

- c. In your opinion, does a clear and achievable mission statements can be consider as the main root cause of any successful organization? Explain.

[Pada pendapat anda, adakah pernyataan misi yang jelas dan boleh dicapai dapat dikira sebagai tunjang utama kejayaan mana-mana syarikat? Jelaskan.] **(6m)**

- Q2. Buntal Seafood makes 500 wooden packing boxes for fresh seafood per day, working in two 10-hour shifts. Due to higher demand, plant manager have decided to operate three 8-hours shift instead. The plant is now able to produce 650 boxes per day. Calculate the company's productivity before the change in work rules and after the change. What is the percentage of change in productivity?

[Kedai makanan laut Buntal membuat 500 kotak pembungkusan kayu untuk makanan laut segar setiap hari, bekerja dalam dua syif 10 jam. Kerana permintaan yang tinggi, pengurus kilang telah memutuskan untuk menjalankan tiga shif 8 jam sebagai gantinya. Kini, kilang itu mampu untuk menghasilkan 650 kotak sehari. Hitung produktiviti syarikat sebelum perubahan peraturan kerja dan selepas perubahan. Berapakah peratusan perubahan produktiviti?]

(10m)

Q3. Mr Fayyadh is considering buying a new truck for its service company. Given the good economic growth conditions, he is not sure whether to buy a subcompact, compact or full-size truck. A friend informed that there is a 30% chance that oil prices will go down. While 20% oil prices will increase, and 50% oil prices will not change. Based on the information, Mr Fayyadh drafted a decision table stating the total profit after a period of one year for the combination of trucks and oil prices.

[Encik Fayyadh sedang mempertimbangkan untuk membeli trak baru bagi syarikat perkhidmatannya. Memandangkan keadaan pertumbuhan ekonomi baik, beliau tidak pasti samaada hendak membeli trak jenis sub kompak, kompak atau saiz penuh. Seorang rakan memaklumkan bahawa terdapat 30% peluang harga minyak akan turun. Manakala 20% harga minyak akan meningkat dan 50% harga minyak tidak berubah. Berdasarkan maklumat tersebut, Encik Fayyadh merangka satu jadual keputusan menyatakan jumlah keuntungan selepas tempoh setahun bagi kombinasi trak dan harga minyak.]

Alternative <i>[Alternatif]</i>	Oil prices are down <i>[Harga minyak turun]</i>	Oil prices have not changed <i>[Harga minyak tidak berubah]</i>	Oil prices are rising <i>[Harga minyak meningkat]</i>
Subcompact <i>[Subkompak]</i>	16,000	21,000	23,000
Compact <i>[Kompak]</i>	15,000	20,000	22,000
Full size <i>[Saiz penuh]</i>	18,000	19,000	6,000

- a) What is Maximax's decision?
[Apakah keputusan Maximax?] (2m)
- b) What is Minimax's decision?
[Apakah keputusan Minimax?] (2m)
- c) What is Equally like decision?
[Apakah keputusan kemungkinan sama?] (2m)
- d) Determine the alternative that provide the maximum expected monetary value (EMV).
[Tentukan pilihan alternatif yang maksima bagi nilai jangkaan kewangan EMV]. (2m)
- e) Compute the expected value of perfect information (EVPI)
[Kirakan nilai jangkaan maklumat lengkap (EVPI)] (2m)

Q4. The Donna Clothing Group owns factories in three towns; Factory W, Factory Y and Factory Z, which distribute to three retail dress shops; Dress shop A, Dress shop B and Dress shop C. The following table shown factory availabilities, projected store demands and unit shipping costs:

[Kumpulan Pakaian Donna memiliki kilang di tiga bandar; Kilang W, Kilang Y dan Kilang Z, yang mengedar pakaian ke tiga kedai pakaian runcit iaitu di; Kedai Pakaian A, Kedai Pakaian B, dan Kedai Pakaian C. Jadual berikut menunjukkan ketersediaan kilang, permintaan kedai yang diunjurkan dan kos penghantaran seunit:]

To/From (Kepada / Daripada)	Dress shop A (Kedai pakaian A)	Dress shop B (Kedai pakaian B)	Dress shop C (Kedai pakaian C)	Factory availability (Ketersediaan kilang)
Factory W (Kilang W)		9	11	150
Factory Y (Kilang Y)	8	12	12	175
Factory Z (Kilang Z)	5	6	13	275
Store demand (Permintaan kedai)	200	100	300	600

Find an initial solution and calculate total cost using:

[Cari penyelesaian optimum dan kira jumlah kos menggunakan:]

- a) North-west corner rule method
[Kaedah pepenjuru barat laut] (3m)

- b) Intuitive lowest cost method
[Kaedah aturan sel minima] (3m)

- c) Stepping-stone method for (b)
[Kaedah batu loncatan untuk (b)] (4m)

Q5. Annual demand for a product is 15,000 units. The company expects that annual holding costs is RM 25 per unit and annual ordering costs is RM 75. The company operates 300 days per year and lead time to receive order is 8 working days. Calculate:

[Permintaan tahunan untuk sebuah produk ialah 15,000 unit. Syarikat telah menganggarkan bahawa kos penyimpanan tahunan produk tersebut ialah RM 25 per unit, manakala kos pesanan tahunan produk tersebut ialah RM 75. Syarikat beroperasi 300 hari setahun manakala masa anjur untuk menerima pesanan ialah 8 hari bekerja. Kirakan:]

- a) Economic order quantity (EOQ)
[Kuantiti pesanan ekonomik (EOQ)] (2m)

- b) Annual holding costs (2m)
[Kos penyimpanan tahunan]

- c) Annual setup costs
[Kos pesanan tahunan] (2m)
- d) Average inventory level
[Purata inventori] (2m)
- e) Reorder point
[Titik pesanan semula] (2m)

**** END OF QUESTIONS/ SOALAN TAMAT ****