

SULIT



BAHAGIAN PEPERIKSAAN DAN PENILAIAN  
JABATAN PENGAJIAN POLITEKNIK  
KEMENTERIAN PENDIDIKAN MALAYSIA

JABATAN PELANCONGAN DAN HOSPITALITI

PEPERIKSAAN AKHIR  
SESI JUN 2013

**HH207: MATHEMATICS FOR FOOD SERVICE OPERATION**

**TARIKH : 22 OKTOBER 2013  
TEMPOH : 2 JAM (8.30 AM - 10.30 AM)**

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Kertas ini mengandungi **ENAM BELAS (16)** halaman bercetak.

Bahagian A: Esei (6 soalan)

Dokumen sokongan yang disertakan : Table Of Conversion

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**JANGAN BUKA KERTAS SOALANINI SEHINGGA DIARAHKAN**

(CLO yang tertera hanya sebagai rujukan)

SULIT



**SECTION A****SECTION A****ESSAY (100 marks)****ESEI (100 markah)****INSTRUCTION:**

This section consists of **SIX (6)** structured questions. Answer **FIVE (5)** questions only.

**ARAHAN:**

Bahagian ini mengandungi **ENAM (6)** soalan berstruktur. Jawab **LIMA (5)** soalan sahaja.

**QUESTION 1****SOALAN 1**CLO 1  
C1

- a) Besides length, state another **THREE (3)** measurement categories that are used widely in foodservice operation. Give an example of measurement unit for each category.

*Selain jarak, nyatakan **TIGA (3)** kategori pengukuran yang digunakan secara meluas dalam operasi perkhidmatan makanan. Berikan contoh unit pengukuran bagi setiap satu kategori.*

(6 marks)

(6 markah)

CLO 1

C1

- b) State the symbol for the following unit:

- i) teaspoon
- ii) ounce
- iii) pound
- iv) milliliter

(4 marks)

(4 markah)

CLO 1

C2

- c) Convert the following units into the unit required:

- Tukarkan unit-unit berikut kepada unit yang dikehendaki:
- i)  $1\text{g} = \underline{\hspace{2cm}}\text{oz}$  (2 marks)  
(2 markah)
  - ii)  $1\text{lb} = \underline{\hspace{2cm}}\text{kg}$  (2 marks)  
(2 markah)
  - iii)  $1\text{kg} = \underline{\hspace{2cm}}\text{lb}$  (2 marks)  
(2 markah)
  - v)  $180^{\circ}\text{F} = \underline{\hspace{2cm}}^{\circ}\text{C}$  (4 marks)  
(4 markah)

**QUESTION 2****SOALAN 2**

- a) Answer the following questions based on the recipe below:

*Jawab soalan-soalan berikut berdasarkan resipi di bawah:*

Portion/Porsi : 8

**HUNGARIAN GOULASH**

600 g	Tenderloin Meat/ daging batang pinang
200 g	Red Carrot / lobak merah
200 g	Celery / seleri
200 g	White Radish / lobak putih
200 g	Potato / ubi kentang
75 g	Paprika / paprika
150 g	Onion / bawang besar
50 g	Garlic / bawang putih
250 g	Meat Stock / stok daging
45 g	All Spice / semua herba

CLO 2  
C3

- i) Calculate the new amount of each ingredient above if 10 portions are needed.

*Kira jumlah baru bagi setiap bahan di atas jika 10 porsi diperlukan.*

(13 marks)

(13 markah)

CL  
C  
311

- i) Calculate the portion number that can be produced from the recipe if the size per portion is 180g.

*Kirakan jumlah porsi yang boleh disediakan daripada resipi jika saiz per porsi ialah 180g.*

(4 marks)

(4markah)

**CLO 2****C2**

- iii) Calculate a new main course yield based on the recipe yield formula.

*Berdasarkan "recipe yield formula" kirakan "yield" hidangan utama.*

(3 marks)

(3 markah)

**QUESTION 3****SOALAN 3**CLO 3  
C2

- a) Summarize the meaning of the terms below.

*Berikan maksud bagi istilah-istilah di bawah:*

i) As Purchased

(2 marks)

(2 markah)

ii) Waste

(2 marks)

(2 markah)

iii) Edible Portion

(2 marks)

(2 markah)

- b) Standard Recipe of Seafood Fried Rice for 8 portion

*Resipi standard untuk Nasi Goreng Makanan Laut bagi 8 porsi*

Amount of Ingredients Used / jumlah bahan yang digunakan	As purchased price/kg <i>Harga As</i> Purchased/kg	Edible portion price/kg <i>Harga Edible</i> Portion/kg	Total cost for each item / Jumlah kos bagi setiap item
500g Basmati Rice / Beras Basmati	RM10.00	RM10.00	RM5.00
150g Shallot / bawang kecil	(i)	RM5.65	RM0.85
200g Prawn / udang	RM12.00	(ii)	RM4.00
250g Chicken/ayam	RM4.80	RM7.38	(iii)
150g Squid/sotong	RM8.00	(ii)	(iii)
250g Carrot/lobak	RM2.60	RM3.25	RM0.81

- CLO 3 i) Calculate the cost per unit (As Purchased) for every kg of shallot as EP percentage (%) is (85%).

*Kirakan kos per unit (As Purchased) bagi setiap kg bawang kecil sekiranya porsi yang boleh digunakan (EP) adalah 85 peratus.*

(2 marks)

(2 markah)

- CLO 3 ii) Compute the cost per unit (Edible Portion) for every kg of prawn and squid as EP percentage (%) is (60%).

*Kirakan kos per unit (Edible Portion) bagi setiap kg udang dan sotong sekiranya porsi yang boleh digunakan (EP) adalah 60 peratus.*

(4 marks)

(4 markah)

- CLO 3 iii) Calculate the total cost for chicken and squid.  
C3

*Kirakan jumlah kos bagi ayam dan sotong.*

(4 marks)

(4 markah)

- CLO 3 iv) Calculate the total food cost for Seafood Fried Rice dish.  
C3

*Kirakan jumlah kos makanan bagi resipi Nasi Goreng Makanan Laut.*

(2 marks)

(2 markah)

- CLO 3 v) Calculate the food cost per portion for Seafood Fried Rice dish.  
C3

*Kirakan kos makanan per porsi bagi resipi Nasi Goreng Makanan Laut.*

(2 mark)

(2 markah)

**QUESTION 4****SOALAN 4**

- a) Use the information below to solve the calculation required.

*Selesaikan pengiraan yang diperlukan dengan menggunakan maklumat di bawah.*

Item	As Purchased Weight	Trim Loss	Yield Weight	Yield Percentage
Chicken / ayam	8.3 kg	1.2 kg	7.1 kg	(ii)
Squid / sotong	9.5 kg	4.6 kg	4.9 (i)	51.57%
Prawn / udang	2.3 kg	0.8 kg	1.5 kg	(ii)
Fish Fillet / filet ikan	7.2 kg	6.8 kg	(i)	5.55%
Salmon	6.9 kg	3.4 kg	3.5 kg	(ii)

- i) Calculate the yield weight of squid and fish fillet.

*Kirakan 'Yield Weight' bagi sotong dan filet ikan.*

(4 marks)

(4 markah)

- ii) Calculate the yield percentage of chicken, prawn and salmon.

*Kirakan peratusan 'yield' bagi ayam, udang dan salmon.*

(6 marks)

(6 markah)

CLO 3  
C3

CLO 3  
C3

- b) Mr. Firdaus wants to organize a dinner party for his anniversary. He came to your restaurant and requested 50 lb of raw chicken breast for the steak to be served to his guests. Based on the Yield Testing Form below :

*Encik Firdaus hendak menganjurkan majlis makan malam untuk hari ulang tahunnya. Dia telah datang ke restoran anda dan meminta 50 lb dada ayam mentah untuk menyediakan stik untuk tetamunya. Berdasarkan 'Yield Testing Form' di bawah:*

**Yield Testing Form**

Food Item / item makanan	:	Chicken Breast / dada ayam
A.P Price / Harga A.P	:	RM 2.14
A.P Weight / Berat A.P	:	45 lb
Total A.P Cost / Jumlah Kos A.P	:	RM 74.90
Total Item Yield / Jumlah Item Yield	:	20 lb
Total Net Cost / Jumlah Kos bersih	:	RM 45
Net Cost Per Pound / Kos Bersih per paun	:	RM 4.28
Percent of Increase / peratusan peningkatan	:	200 %

By product, Trim and Waste:

ITEM / ITEM	WEIGHT/ BERAT (lb)	VALUE/ NILAI (lb)	TOTAL VALUE / JUMLAH NILAI
Wings / kepak	4.5	RM1.20	5.40
Thigh / pangkal paha	12.5	RM1.80	22.50
Bones / tulang	5	RM0.40	2.00
Cutting loss	2.5	-	-

T

Total Weight / jumlah berat	:	24.5 lb
Total Value / jumlah nilai	:	RM 29.9

CLO 3

C3

- i) Calculate the amount of whole chicken in pound (lb) that you must purchase in order to obtain 50 lb of raw chicken breast.

*Kirakan jumlah ayam dalam paun (lb) yang perlu anda beli untuk mendapatkan 50 lb dada ayam mentah.*

(4 marks)

(4 markah)

CLO 3

C3

- ii) If Mr. Firdaus wants to add another 35 lb of raw chicken breast for his anniversary party, calculate the new total weight in kilograms (kg) of whole chicken that you have to purchase for that party.

*Jika En. Fidaus hendak menambahkan lagi 35 lb dada ayam mentah untuk majlis ulang tahun beliau, cari jumlah berat baru dalam kilogram (kg) seekor ayam yang anda perlu beli untuk majlis tersebut.*

(6 marks)

(6 markah)

## QUESTION 5

## SOALAN 5

Mr. Kamal operates Pauh D'Layang Restaurant situated at the central of Kuala Lumpur. He forecasts that the number of customers for this year will be the same as last year that is 15,000 customers. The total sales for last year were RM 65,000.

*Encik Kamal menguruskan Restoran Pauh D'Layang yang terletak di bandar Kuala Lumpur. Dia menganggarkan jumlah pelanggan pada tahun ini akan sama dengan tahun lepas iaitu seramai 15,000 pelanggan. Jumlah jualan pada tahun lepas ialah RM65,000.*

CLO 4  
C3

<b>Month</b> <i>1 bulan</i>													<b>TOTAL / JUMLAH</b> <i>(RM)</i>
	JAN	FEB	MAR	APR	MAY	JUNE	JULY	AUG	SEP	OCT	NOV	DEC	
<b>Food</b>	21	280	225	230	220	(i)	200	245	255	210	240	235	<b>2760</b>
<b>Cost / kos makanan</b>	00	0	0	0	0		0	0	0	0	0	0	<b>0</b>
<b>Overhead</b>	11	900	100	900	(ii)	900	100	110	110	900	110	100	<b>1200</b>
<b>Cost / kos overhead</b>	00		0				0	0	0		0	0	<b>0</b>
<b>Labor</b>	20	160	(iii)	170	200	190	200	250	190	200	185	195	<b>2300</b>
<b>Cost / kos buruh</b>	00	0		0	0	0	0	0	0	0	0	0	<b>0</b>

- a) Complete the table above (i), (ii) and (iii). Show your detail calculation.

*Lengkapkan jadual di atas (i), (ii) dan (iii). Tunjukkan jalan pengiraan.*

(3 marks)

(3markah)

CLO 5

C2

- b) Compute

*Kirakan*

- i) The Total Gross Profit / *Jumlah Untung Kasar*
- ii) The Gross Profit Per Customer / *Untung Kasar per pelanggan*

(6 marks)

(6 markah)

- c) By using profit based pricing technique, if the average food cost per customer for breakfast item is as below, calculate how much should Mr. Kamal charge the customer for Nasi Lemak and Chicken Porridge?

*Dengan menggunakan “based pricing technique”, jika purata kos makanan per pelanggan bagi sarapan adalah seperti di bawah, kirakan berapa bayaran yang harus Encik Kamal kenakan kepada pelanggan untuk Nasi Lemak dan Bubur Ayam?*

<b>Breakfast Item / Item Sarapan (Per Set)</b>	<b>Food Cost / Kos Makanan (RM)</b>
Nasi Lemak	3.50
Chicken Porridge /Bubur Ayam	2.50

(4 marks)

(4 markah)

CLO 5  
C3

- d) Calculate the new selling price for Nasi Lemak if the food cost is RM 4.50 and the mark up rate is  $\frac{3}{4}$ .

*Kirakan harga jualan yang baru bagi Nasi Lemak jika kos makanan adalah RM4.50 dan kadar ‘mark-up’ adalah  $\frac{3}{4}$ .*

(4 marks)

(4 markah)

CLO 5  
C2

- e) Give **THREE (3)** Costs related pricing methods and **THREE (3)** non-cost related pricing methods.

*Berikan **TIGA (3)** kaedah berdasarkan kos dan **TIGA (3)** kaedah bukan berdasarkan kos.*

(3 marks)

(3 markah)

**QUESTION 6****SOALAN 6**CLO 6  
C3

- a) As a supervisor of La Rizz Restaurant, you are in charge of lunch, which serves from 12.00 p.m to 2.30 p.m. Calculate the value of (i) to (vii).

*Sebagai seorang penyelia di Restoran La Rizz, anda bertugas menguruskan makanan tengahari, yang beroperasi dari 12.00 tengahari sehingga 2.30 petang. Cari nilai bagi (i) hingga (vii).*

ITEM / ITEM	QUANTITY SOLD / JUMLAH DIJUAL	SELLING PRICE PER ITEM / HARGA JUALAN PER ITEM	TOTAL SALES / JUMLAH JUALAN (RM)
<b>APPERTIZERS / PEMBUKA SELERA</b>			
Otak-otak	(i)	3.50	21.00
Stuffed Beancurd	14	(ii)	44.80
Fish Pepes	18	3.30	(iii)
<b>MAIN COURSE / HIDANGAN UTAMA</b>			
Beringin Rice	17	6.50	110.50
Bukhari Rice	(iv)	6.00	138.00
Baghdad Rice	21	7.50	(v)
<b>DESSERT / PENCUCI MULUT</b>			
Layer cake	15	4.00	60.00
Rainbow Sago	19	4.00	76.00
<b>TOTAL / JUMLAH</b>	(vi)		(vii)

(15 marks)

(15 markah)

CLO 6  
C3

- b) Calculate the average check.  
*Kirakan 'average check'.*

(5 marks)

(5 markah)

**SOALAN TAMAT**



**TABLE OF CONVERSION****1. Imperial System to Metric System**

When you know...	Multiply by..	To find..
Ounces	28	Grams
Pounds	0.45	Kilograms
Inches	2.5	Centimeters
Feet	30	Centimeters
Yards	0.9	Meters
Miles	1.6	Kilometers
Teaspoon	5	Milliliters
Tablespoon	15	Milliliters
Fluid Ounces	30	Milliliters
Fluid Ounces	0.03	Liters
Cups	0.25	Liters
Pints	0.47	Liters
Quarts	0.95	Liters
Cubic Feet	0.03	Cubic Meters
Cubic Yards	0.76	Cubic Meters

**2. Metric System to Imperial System**

When you know...	Multiply by..	To find..
Grams	0.035	Ounces
Kilograms	2.2	Pounds
Cubic Meters	35	Cubic Feet
Cubic Meters	1.3	Cubic Yards
Millimeters	0.04	Inches
Centimeters	0.4	Inches
Meters	3.3	Feet
Kilometers	0.6	Miles

Milliliters	0.2	Teaspoon
Milliliters	0.07	Tablespoon
Milliliters	0.03	Fluid Ounces
Liters	30	Ounces
Liters	2.1	Pints
Liters	1.06	Quarts
Liters	0.026	Gallon

### 3. Equivalents Of Weights And Other Measures

3 teaspoons	1 tablespoon
2 tablespoons	1 ounce
4 tablespoons	$\frac{1}{4}$ cup
12 tablespoons	$\frac{3}{4}$ cup
16 tablespoons	1 cup
8 ounces	1 fluid cup
16 ounces	1 pound
8 tablespoons	$\frac{1}{2}$ cup