<table>
<thead>
<tr>
<th>KOD KURSUS</th>
<th>EG5013 MANAGERIAL ECONOMICS</th>
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<tbody>
<tr>
<td>TARIKH</td>
<td>08 AUGUST 1999</td>
</tr>
<tr>
<td>MASA</td>
<td>3.00 PETANG – 5.00 PETANG</td>
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<tr>
<td>TEMPAT</td>
<td>SUNGAI PETANI</td>
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**ARAHAAN**

Attempt any three questions

Write answers in the Q Booklet

<table>
<thead>
<tr>
<th>NO. MATRIK</th>
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<tr>
<td>NO. KAD PENGENALAN</td>
<td>:</td>
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<tr>
<td>NAMA PENSYARAH</td>
<td>PROF. MADYA DR. DAWOOD M.MITHANI</td>
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</tbody>
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**JANGAN BUKA SOALAN INI SEHINGGA DIBERI ARAHAAN**
N.B: Attempt any three questions.

Q.1. [20 Marks]

a) What is law of demand? What are the exceptions to it?

[6 Marks]
b) Explain using diagrams the difference between 'extension of' and 'increase in' demand.

[4 Marks]
c) How would the sales revenue change, when the price is raised in the case of:

i) Unitary elastic demand
ii) Elasticity efficient is less than one
iii) \( e \ > \ 1 \)

[3 Marks]

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d) Specify the demand function for Produa Russa van Malaysia.

[2 Marks]
e) What are the determinants of market demand for products in general?

[5 Marks]
Q.2. [20 Marks]

(a.) What is meant by elasticity of demand? Define price, income, cross and advertising elasticities of demand.

[5 Marks]
(b.) Malaysian Electric Co. (MEC) is developing a new design for its electric hair-dryer. Test market data indicates demand for the new hair-dryer as follows:

\[ Q = 30,000 - 5,000 P \]

Where \( Q \) = hair-dryer sales,
\( P \) = price

i) How many hair-dryer could MEC sell at RM35 each?

ii) What price would MEC have to charge to sell 20,000 hair-dryer?

iii) At what price would hair-dryer sales be zero? What could be the maximum price to sale at least one hair-dryer?

iv) Calculate point price elasticity of demand at price RM35.

v) Is the demand elastic at price RM 30?

[ 10 Marks]
(c.) A firm increased advertising outlays from RM6,000 to RM7,000 last month which resulted into expansion of sales of its product from 25000 to 26000 units. Estimate point and are advertising electricity of demand and give you comment.

[5 Marks]
Q.3. [20 Marks]

(a.) Export sales of Adam Enterprise for the current decade are as follows:

<table>
<thead>
<tr>
<th>Year</th>
<th>Sales (in '000 units)</th>
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<tbody>
<tr>
<td>1991</td>
<td>90</td>
</tr>
<tr>
<td>1992</td>
<td>110</td>
</tr>
<tr>
<td>1993</td>
<td>160</td>
</tr>
<tr>
<td>1994</td>
<td>140</td>
</tr>
<tr>
<td>1995</td>
<td>170</td>
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<td>1996</td>
<td>200</td>
</tr>
<tr>
<td>1997</td>
<td>210</td>
</tr>
<tr>
<td>1998</td>
<td>190</td>
</tr>
</tbody>
</table>

Using method of moving average project the trend of sale for the year 2000 with graphical presentation.

OR

Estimate the linear trend using the least square method.

[8 Marks]
(b.) A company has estimated the following demand function for its product X, assuming Qx = quantity of X, Px = price of X, \( R = \) price of substitute, A = advertising expenses

\[
\text{Log } Q_x = 5.111 - 2.2 \log P_x \\
+ 0.9 \log P_y + 1.3 \log A \\
(1.1) \\
(0.3)
\]

Adjusted R-square = 0.899
(parentheses represent standard errors)

i) Comment on the fitness of the model

ii) State the significance of the determinants in influencing the demand for X.

iii) State the price, cross and advertising elasticities of demand.

[6 Marks]
(c.) What are the factors determining elasticity of demand?

[6 Marks]
Q.4. [20 Marks]

(a.) What is production function? State short run and long run production function

[3 Marks]
(b.) Alibaba Car Wash unit has the following production function:

\[ Q = 20L - 2L^2 \]

Where

- \( Q \) = Number of car washes
- \( L \) = Number of washes

Wage rate is RM10. Charges per car wash are fixed at RM6. How many workers should be optimally employed in this unit?

[5 Marks]
(c.) Diagrammatically explain the relationship between average product and marginal product of a variable factor in the short run.

[4 Marks]
(d.) \( Q_X = 1.4 \ L^{0.8} \ K^{0.5} \)

Where \( Q_X \) = output of \( X \)
\( L \) = labour units
\( K \) = capital units if \( L = 100 \) and \( K = 50 \)
Work out average and marginal product of labour and capital.

[2 Marks]

(e.) Define output elasticity \((eQ)\).
How will you infer increasing returns from the output elasticity?

[2 Marks]

(f.) If:
\[ Q = 50L + 8L^2 - 2L^3 \]
Work out average and marginal product for 10 employees.

[2 Marks]