

Complete, fold and seal
(see note 2 below)

SURNAME: Doughas

FORENAME(S): Dimitris

Instructions to Candidates

1. Please give the information requested in the boxes below.
2. Enter your name in the space provided to the right, fold over and seal down (using the label provided) to hide your name.
3. The answers must be legibly written. The Examiners can either ignore illegible script or have it typed and the expense of typing charged to the candidate.
4. Write your answers in ink.
5. Begin each answer on a fresh page. Do all rough work in the answer book and cross it through.
6. No part of this book is to be torn out; it must be handed in complete.
7. If more books than one are used, fasten them together using the tags available from the invigilator(s).
8. **Every book must be handed in. In no circumstances may answer books, used or unused, be taken out of the examination venue.**

List the numbers of the questions you have attempted	Office Use
1	6
7	14 $\frac{1}{2}$
6	7
	27 $\frac{1}{2}$
Total	37 $\frac{1}{2}$

1) Section A

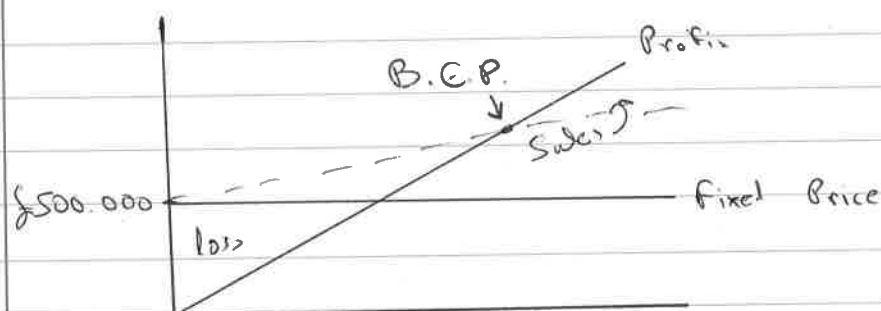
a) To calculate the Break-even point we are going to use B.E.P. =

$$B.E.P. = \frac{\text{Fixed costs}}{\text{Selling price per unit} - \text{Variable costs per unit}}$$

so

$$B.E.P. = \frac{\pounds 500,000}{20 - 7} \Rightarrow \underline{B.E.P. = 38461 \text{ units}}$$

(b)



(c)

0/4

2/3

4/4

d) IF annual output falls to 75%

Mean, From £500,000 will reduce to £375,000

~~Then company spend~~ ~~£420,000~~ ~~per unit~~

$$\text{So } £90 \times 60000 \text{ units} = £12000000 - £375000$$

e)

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7) Section C

i) Some of the possible reasons for the City and County of Swansea to consider this change I would say that are:

- Environmental Friendly buses by reducing the NOx emissions to the atmosphere. ✓
- Removal of the old generations buses ✓
- Hybrid diesel electric buses reduces the cost for fuels. ✓
- Noise reduction ✓

$$\frac{3\frac{1}{2}}{4}$$

ii) This analysis will include:

Political

Environmental impact

CO₂ emission reduce ✓

New positions for people to work ✓

City and County of Swansea terms and conditions apply ✓

Tax income increase ✓

$$\frac{3}{4}$$

Environmental

The daily impact to the environment
clean energy

$$\frac{1}{4}$$

Social

Promoting clean energy ✓

More people would be willing to travel with these buses ✓

More routes and more often.

The aesthetic of the buses is important too. ✓ 3/4

Ticket price reduction probably would also make more people to leave their cars. ✓

Technological

New and innovative bus ✓

Innovative bus stations

Easy service and maintenance ? 2/4

Contactless tickets

USB chargers in every seat

Comfort. ✓

iii) I would definitely advise the city and county of Swansea to go with the adoption of Hybrid buses as it would have a huge impact on the environment and will reduce the NOx emissions. Green buses appear in every big city around us and the advantages are many. Hybrid buses is a step forward to innovation and clean energy for everyone. ✓ 2/3

14/15