

Complete, fold and seal
(see note 2 below)

SURNAME: Davizo

FORENAME(S): Lloyd William

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.**

1	Student Number	1707513/1
2	Title of Examination Paper	~~1707513/1~~ Management innovation and Sustainability
3	Module Code	GSAC 5004
4	Date and Time of Examination	17 May 2019 14:00
5	Examination Venue	hall
6	Seat Number	
7	Number of Answer Books handed in	1

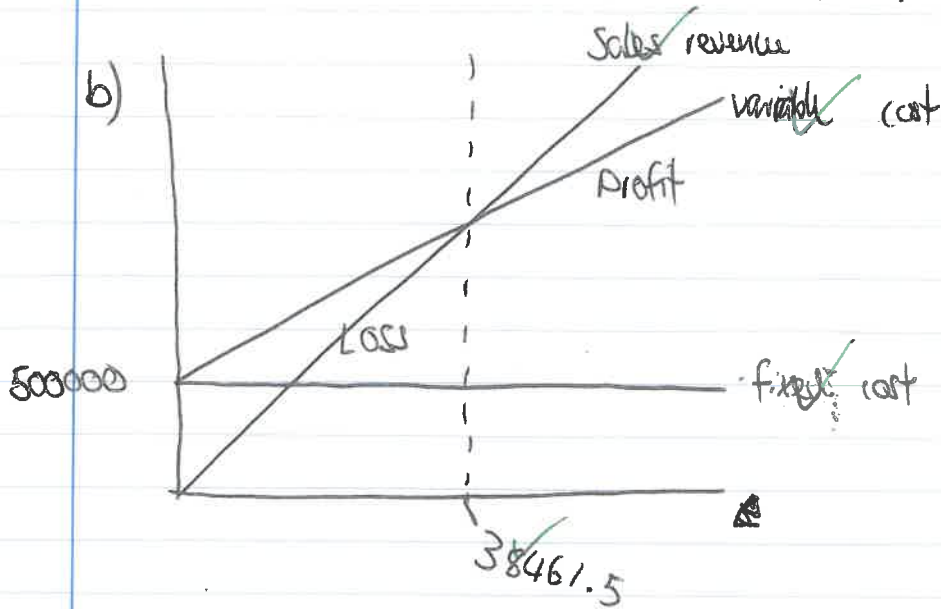
List the numbers of the questions you have attempted	Office Use
1	15
2	~~15~~ 15
3	16
Total	46

46/75

61%

① a) break even point = $\frac{500000}{20 - 7} = 38461.5$ ✓

2



4

c) ~~60000 - 45000 = 15000~~

$$45000 - 38461.5 = 6538.5$$

3

d) $60000 \times 0.75 = 45000$

1

$$45000 \times 20 = 900000$$

$$45000 \times 7 = 315000$$

$$900000 - 315000 = 585000$$

2

e) Break even analysis can only be applied to linear conditions. It does not take into account stock that a company might be holding for fluctuations in demand. Break even analysis assumes costs and revenue stay the same due to these reasons it is only effective to a certain extent, however it can still be a useful tool.

3

(Project 1)

0	200 000
1	80 000
2	50 000
3	45 000
4	40 000

(120 000)
(70 000)
(25 000)
15 000

$$\frac{25000 + 15000}{12} = 3333.3$$

$$\frac{25000}{3333.3} = 7.5$$

3 years and 7.5 months

Project 2

0	200 000
1	60 000
2	50 000
3	30 000
4	60 000

(140 000)

(70 000) (90 000)

(20 000) (40 000)

40 000 20 000

$$\frac{20000 + 40000}{12} = 5000$$

~~30000~~
~~5000~~

$$\frac{40000 + 20000}{12} = 5000$$

~~3 years and 4 months~~ ~~3 years and 4 months~~

$$\frac{40000}{5000} = 8$$

3 years and 8 months

2

Project 3

0	200000		
1	70000	(130000)	
2	60000	(70000)	
3	50000	(20000)	
4	60000	40000	

$$> \frac{20000 + 40000}{12} = 5000$$

3 years and 4 months ✓

$$\frac{20000}{5000} = 4$$

2

b)

	1	
200000		
80000	0.9091	72728
50000	0.8264	41320
45000	0.7513	~~33808.5~~
40000	0.6830	~~27320~~
	~~0.8810~~	

Project 1

Total = 175176.5

Total - original

$$175176.5 - 200000 = £-24823.5 ✓$$

3

Project 2

	1	
200000		
60000	0.9091	54546
50000	0.8264	41320
50000	0.7513	37565
60000	0.6830	40980

Total = 174411

Total - original

$$174411 - 200000 = £-25589 ✓$$

3

Project 3	(C)	
200000	1	~~62738~~
70000	0.9091	63637 ✓
60000	0.8264	49584 ✓
50000	0.7513	37565 ✓
60000	0.6830	40980 ✓
		<u>Total = 232746</u>

$$232746 - 200000$$

$$= 32746$$

	Project A	Project B	Project C
c) payback	3 years 7.5 months	3 years 8 months	3 years 6 months
Net present value	£-24823.5	£-25589	£32746

all three projects payback within four months of each other, around 3 and a half years. Project A and B are very similar in time and net present value. They both made a loss of around £25000. Project C is the project I would choose as it is the biggest profit in the smallest amount of time.

d) When making a capital investment there are several factors that should be considered. Staying competitive is very important, sometimes keeping up with competition can force you to make a investment in new machinery for example speeding up the processes. Calculating the risk/reward is important, is it actually worth it. there could be other aspects of your business that the money could be used on which are more urgent.

- ③ a) The location of a warehouse is key to its smooth operation. There are many ~~key~~ factors that need to be considered when evaluating a possible new location. Possibly, the most important is access to the facility. A warehouse/factory usually imports/exports large loads of raw materials and products. The site must be located somewhere with easy access for large vehicles that is close to motorways/docks/train lines. It must be located near a source of raw materials, money can be wasted shipping raw materials too the site. Long term must be considered. Are there still is the site still going to be suitable in years and years to come? Being located close to ~~customers~~ the people you will be selling too, again money could be wasted on logistics. If the business company does business over sea it is important that customers or partners can easily visit the location without traveling for hours and hours by motorway; possibly near an airport... (cont next page)

b)	x	y
S1	3640	720
S2	8370	2250
S3	246	2760
C1	1992	624
C2	7650	2064
C3	2016	1824
C4	858	6630
C5	828	2484
C6	2112	2736

coordinate x demand units

$$x \text{ total} = 27710$$

$$y \text{ total} = 22092$$

$$\text{Total Supply} = S1 + S2 + S3 + C1 + C2 + C3 + C4 + C5 + C6$$

$$= 570$$

$$x = \frac{27710}{570} = 48.6$$

$$y = \frac{22092}{570} = 38.7$$

A good possible area is around the location = coordinates (48.6, 38.7)

a) Continued

~~Is the location around a population~~ #

Is the area around the location going to provide a workforce. People need to work in the factory and a long distance commute makes the job far less appealing. The factory might require a large supply of water for example, is the location capable of supplying the ~~large~~ demand. The environment should be taken into consideration. Does the factory produce much pollution? Is there a place for it to deposit its waste. A recycling plant reasonably close is important.