



Examination Answer Books

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.**

FORENAME(S): Matthew

1	Student Number	NEA 20856038
2	Title of Examination Paper	Management Innovation and Sustainability
3	Module Code	GOEN 5001
4	Date and Time of Examination	06/05/2025 13:30
5	Examination Venue	W2 Hall GCS
6	Seat Number	A4
7	Number of Answer Books handed in	

List the numbers of the questions you have attempted	Office Use
1	16
2	18
3	17
Total	51

Rx

$$\frac{51}{75} \times 100 = 68\%$$

1) a) year 0 - 30,000 Total Spend

$$\text{Straight line method} = \frac{\text{Initial cost} - \text{Residual value}}{\text{3 years}}$$

See p. 10

$$= 0.25 \times 30,000 \\ = 7500$$

$$SL = \frac{30,000 - 7500}{3}$$

= 7500 Annual depreciation

$$\text{year 1} = 30,000 - 7500 = 22,500$$

$$\text{year 2} = 22,500 - 7500 = 15,000$$

$$\text{year 3} = 15,000 - 7500 = 7,500$$

b) Reducing balance method

$$\text{year 1) } 25\% \text{ of } 30,000 = 7500 \\ 30,000 - 7500 = 22,500$$

$$\text{year 2) } 0.25 \times 22,500 = 5625 \\ 22,500 - 5625 = 16875$$

$$\text{year 3) } 0.25 \times 16875 = 4218.75 \\ 16875 - 4218.75 = 12656.25$$

c) The Reducing balance method would be the most appropriate for Mr Richardson's business as the value after the three year period is more closer to the actual book value that the products are likely to be sold at.

The Straight line method is easier to calculate than the Reducing balance method as the annual depreciation doesn't change. This makes the ~~five~~ ^{year} TSS accurate after the given time period.

- c) However, with the following below method. Initially, the depreciation is really seems huge but they gradually decrease each year. Because of this the fixed base value of a product tends to be more realistic than the one given by any other method.

Break even point

Let us assume that the fixed costs are Rs. 10,00,000 and the variable cost per unit is Rs. 1000.

Let the selling price be Rs. 1500 per unit.

Let the quantity sold be x units. Then the break even

quantity is given by the following equation

$$P_x = \text{Fixed cost} + \text{Variable cost}$$

Total sales = Fixed cost + Variable cost (238 units)

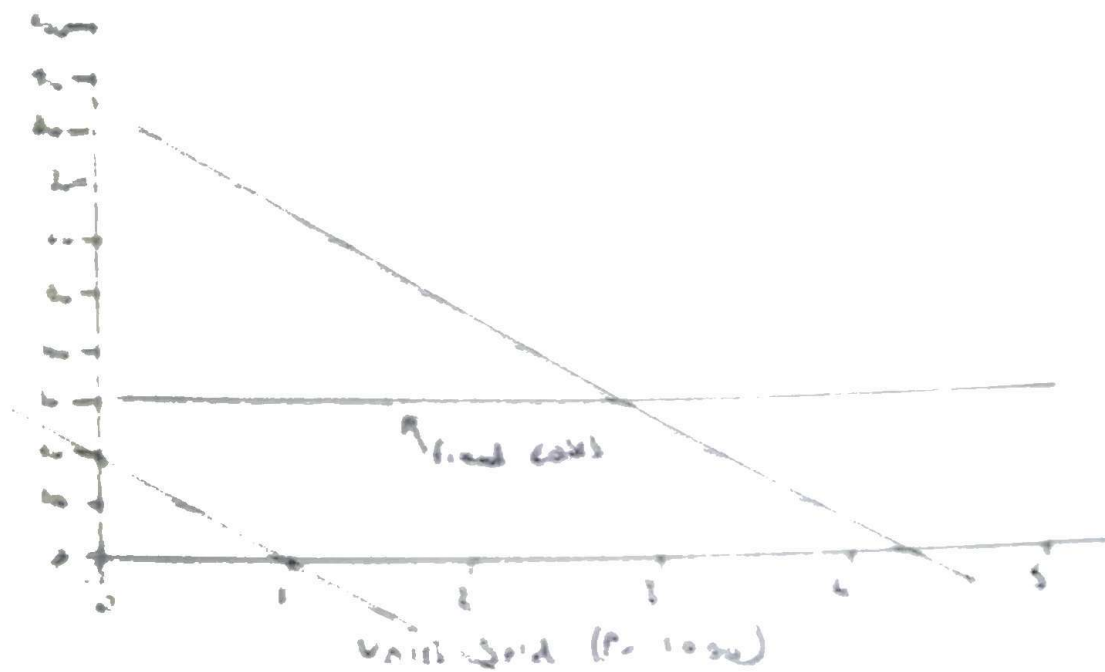
$$P_x = 10,00,000 + (x - 238) \times 1000 = 10,00,000 + 1000x - 2,38,000$$

$$\text{Total} = 10,00,000 + (57 - 1000) = 125,019$$

For graph, when sold 1 unit of 5000

To break even he needs to sell 238 units in month for 2.1 months

$$\text{Break even time} = \frac{1000}{238} = 4.2$$



Total Revenue

$$= 75 \times 1.667$$

Break even occurs at 1.667 units sold

Total

2)
a)

Payback Project A

Year	(£) Cash flow	Cumulative cash flow (£)
0	(200,000)	(200,000) ✓
1	80,000	(120,000) ✓
2	50,000	(70,000) ✓
3	45,000	(25,000) ✓
4	40,000	+15,000 ✓

Payback happens between year 3 and year 4

$$= 3 + \left(\frac{25,000}{40,000} \right) = 3.63 \text{ years } \times$$

Project B

Year	(£) Cash flow	Cumulative cash flow (£)
0	(200,000)	(200,000) ✓
1	60,000	(140,000) ✓
2	50,000	(90,000) ✓
3	50,000	(40,000) ✓
4	60,000	+20,000 ✓

Payback happens between years 3 and 4

$$= 3 + \left(\frac{40,000}{60,000} \right) = 3.66 \text{ years } \times$$

Project C

Year	(1) Cashflow	(2) Cumulative Cashflow
0	(200,000)	(200,000) ✓
1	70,000	(130,000) ✓
2	60,000	(70,000) ✓
3	50,000	(20,000) ✓
4	60,000	40,000 ✓

Payback happens between years 3 and 4

$$= 3 + \left(\frac{20,000}{60,000} \right) = 3.33 \text{ years} \times$$

This makes Project C the best choice for investment as the payback period is shorter than the others.

b) Net-Present-Value

Discount Factors at 10%

Project A

Year	Discount Factor	Present Value
0	1	
1		
2		
3		
4		
5		

b) Net Present Value

Discount Factor at 10%

Year	Cash flow	Discount Factor	Present Value
0	(200,000)	1	
1	80,000	0.9091	£72,728 ✓
2	50,000	0.8264	£41,320 ✓
3	45,000	0.7513	£33,808.50 ✓
4	40,000	0.6830	£27,320 ✓
Total		Total P.V = £175,176.50 ✓	

NPV = Total Present Value - Initial Investment

$$= £175,176.50 - 200,000 = -£24,823.50 ✓$$

Project B

Year	Cash flow	Discount Factor	Present Value
0	(200,000)	1	
1	60,000	0.9091	£54,546 ✓
2	50,000	0.8264	£41,320 ✓
3	50,000	0.7513	£37,565 ✓
4	60,000	0.6830	£40,980 ✓ ?
		Total P.V = £174,411 ✓	

$$NPV = £174,411 - £200,000 = -£25,589 ✓$$

Figure 6

Year	Revenue	Expenses	Profit
1	10,000	8,000	2,000
2	10,000	8,000	2,000
3	10,000	8,000	2,000
4	10,000	8,000	2,000
Total	40,000	32,000	8,000

Profit = Revenue - Expenses
= 10,000 - 8,000
= 2,000

For Figure 6 and the last 3 figures, all earnings are positive. The first is more than the other figures.

1) If I was not in the business I would choose option C. This is because the highest time is 10 years, shorter and the earnings are 2,000. It means it has a smaller risk than the other figures.

2) The first factor to consider is the money, but the important ones include:

Technology - All companies want and need technology to stay ahead of the competition if they can afford it.

Growth - Companies may want to grow in new markets, space or accommodation, new marketing or products.

Competition - The company may want to have less to stay ahead of their rivals.



Another factor would be the economic factors these include.

Inflation, as this would directly affect how much a company can invest. ✓

Global affairs, issues such as Import regulations may stop a company investing in the global market. ✓



3.

B There are 3 types of pricing discrimination used in indus.

1) First degree price discrimination. ^{This} ~~This~~ is often used in car sales as it allows for maximum profit per ~~cost~~ customer. According to what the customer will pay. This is the hardest to use as it requires a great ~~level~~ knowledge about the customer. ✓

(2)

2) Second degree price discrimination. This is often used by utility companies, ~~the~~ where they offer lower rates for using electricity or water during off-peak times. ~~the~~ This form is slightly easier to enforce as people may not be able to take advantages of the lower rate leading to increased revenue for the company. ✓

(2)

3) Third degree pricing discrimination is the final form. This is the easiest option to enforce and is used widely. ~~the~~ This form ~~there~~ uses discounted rates for seniors or students. ~~Flight~~ Airlines like to use this method as they can adjust the ticket price according to where you choose to sit. e.g. economy or business class. They also charge ^{less} ~~more~~ for leisure flyers as they know they will make money from people who are travelling for work. ✓

(3)

3. A) The First Condition for a company to engage in pricing discrimination is having a monopoly over the market. This ensures that they already have loyal customers before they change their pricing.

They can also do it under the condition of treating customers fairly as they have to follow the legislation that doesn't allow for customer pricing to be adjusted based on things like race or gender or religion. The third condition is that they can't allow for their products to be sold at a custom price for a customer then have it resold at a higher price. This is managed by the company's assigning names to the products like flight tickets, so that any resale goes through the company not the individual.

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In conclusion, Price Discrimination is widely used in many industries but it has to follow some basic conditions to allow it to be legal.

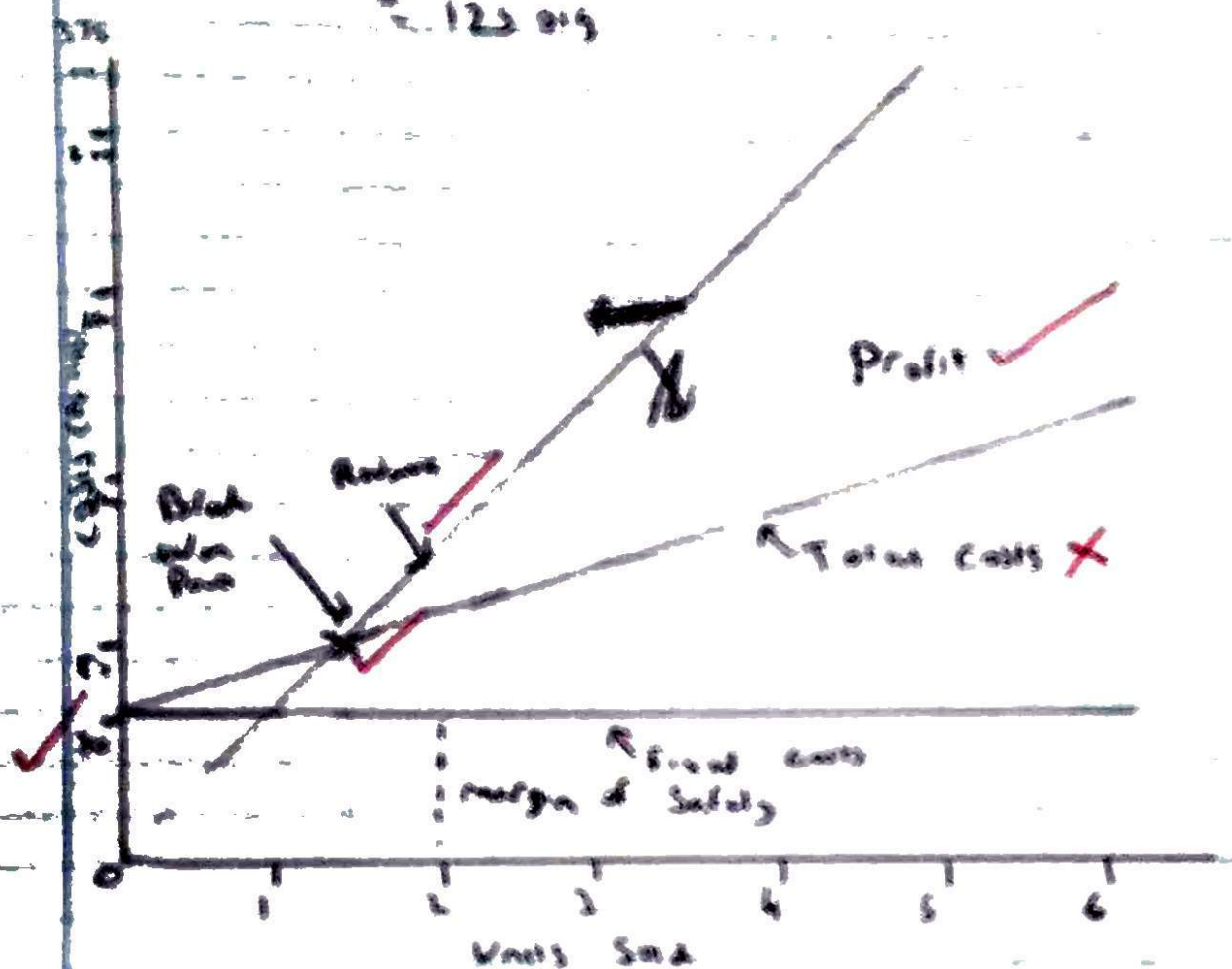


D Break even graph

Q = 1667 Fixed costs = 30,000

Total Revenue = Sale price $\times$ units sold
 $= 75 \times 1667 = 125,025$

Total cost = Fixed + (Variable P.u.)
 $30,000 + (57 \times 1667)$
 $= 125,019$



Break even costs at Selling 1667 units. ✓

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