



**Complete, fold and seal
(see note 2 below)**

N'DOUA

FORENAME(S): DAVID

12 Pages

MARK SANDFORD

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 cannot mark 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	PK50320
2	Title of Examination Paper	MANAGEMENT
3	Module Code	MSX01176
4	Date and Time of Examination	17/05/19
5	Examination Venue	IQ 103
6	Seat Number	R026
7	Number of Answer Books handed in	1

List the numbers of the questions you have attempted	Office Use
1	19
5	11
7	13
	43
Total	57.3



C)

Q 7)

Public Transport Network.

New Idea = Hybrid diesel electric buses.
Ekant.

Reasons for the entry of Sumo:

i)

The city and country of Sumo, should consider
 to this change for different reasons, one could
 be to use a new vehicles (buses) that use less
 fuel and saving some costs. Moreover this change can
 lead to have buses that are environmental friendly.

Answer for

PEST / STEP PESTLE	Political	Social
	Economic	Technological

The PEST / STEP analysis is one of the + E = Environmental

different business strategy tool used in Management and
 Engineering to perform a survey / investigation when it
 comes to invest in a new business.

(*) other business strategy tools are Porter's Forces and SWOT.

Political: reasons or driving forces:

- New "country / country" Public Transport policy ✓

- New laws for Public Transport ✓

ECONOMICAL

- utilize hybrid/electric TO save fuel cost and usage. ✓
- The county of Swansea can push on its new idea, Attracting sponsors companies that ~~could~~ could be interested in the project (Electric electricity companies, gas companies,) ✓
- Attracting sponsors the costs for developing the technology can be reduced easily. ✓
- + The new idea could also ~~be funded~~ ^{relieve} ~~foundings~~ from "Green cooperations and societies" ✓

Social

- Push people to use new hybrid vehicles so they will use less their own cars/bike, saving fuel/money. ✓
- Move Environmental friendly vehicles that can decrease carbon footprints, CO_2 , emissions. ✓
- Using new bus technology could be the start of a new UK trend. ✓

Technological

- The introduction of new hybrid/Electric can determine the develop of electric system such as batteries, lithium batteries, lighter, better batteries. ✓
- The city and County of Swansea could attract
- Starting with the buses the technology could be ~~extended~~ extended to other different vehicles like TAXIS or KARS (trains ...) ✓
- For the future

III) I'd definitely advise the city and the country.

to carry on this new idea, Advise them to try to get the big electric/gas companies of the city to collaborate as a sponsor.

Another advice could be to work with UWTSO and Swansea University involving ^{Engineering} students, trying to get them interested.

Country should also contact the local engineering (electric / ~~Hybrid~~ Hybrid companies trying to work together with the Universities developing new / innovative technologies.)

This type of partnership will bring benefits to both the parties.

2h
3

13
25

Qs)

2

RFG = Request of quotation document is an Engineering / Management document which a customer write (Requested by the interested company)

all the specific information / STANDARDS of a product this document is send to different possible suppliers where it is analysed or by them for them ~~supply~~ provide the ~~supply~~ (sketch)

a Price / Possible price to the customer. The customer will receive all the different RFG documents and will select the most appropriate. (the one that prefer)

In this case Sketty Sports Ltd require a RFG to get the most appropriate deal to produce the 2) carbon fiber panels

Request of Quotation

- ~~Cost of materials~~ (£)
- ~~Cost of labour for autoclave~~ (£)

• Final job price. (£)

Autoclave RFG (From the supplier)

- Cost of autoclave f
- Cost of tools f
- " Transport to customer site f
- Warranty f
- Installation cost.

TOTAL = £

↳ See reasons in

NEXT PAGE



b) When we ^{TALK} take about Life cycle costing we are ~~considering~~ ^{considering} the whole cost of a component, that can be a for example a ~~new~~ the purchase of a new Milling Machine. (Autoclave in this case).

We need to take in account NOT JUST the specific price of the machine but there are other several costs to

Take IN ACCOUNT. Here a LIST of ~~all~~ ^{all the} ~~as~~ ^{all} COST that make the LIFE Cycle COSTing

LCC

- 1) COST of the MACHINE
- 2) COST of TRANSPORT of the machine to our SITE
- 3) COST of INSTALLATION
- 4) COST of TRAINING of the People working on the new machine
- 5) Electricity / ~~Energy~~ CONSUME of the MACHINE
- 6) MAINTENANCE COST (OIL, TOOLS change, ...)
- 7) COST of DISPOSAL.

2/3

c) When IT comes to generate a Life cycle cost is important to have a clear, wide, view of the situation. With that I mean that the ENGINEER / MANAGER / Project MANAGER have to consider several FACTORS :

(AUTOCLAVE)

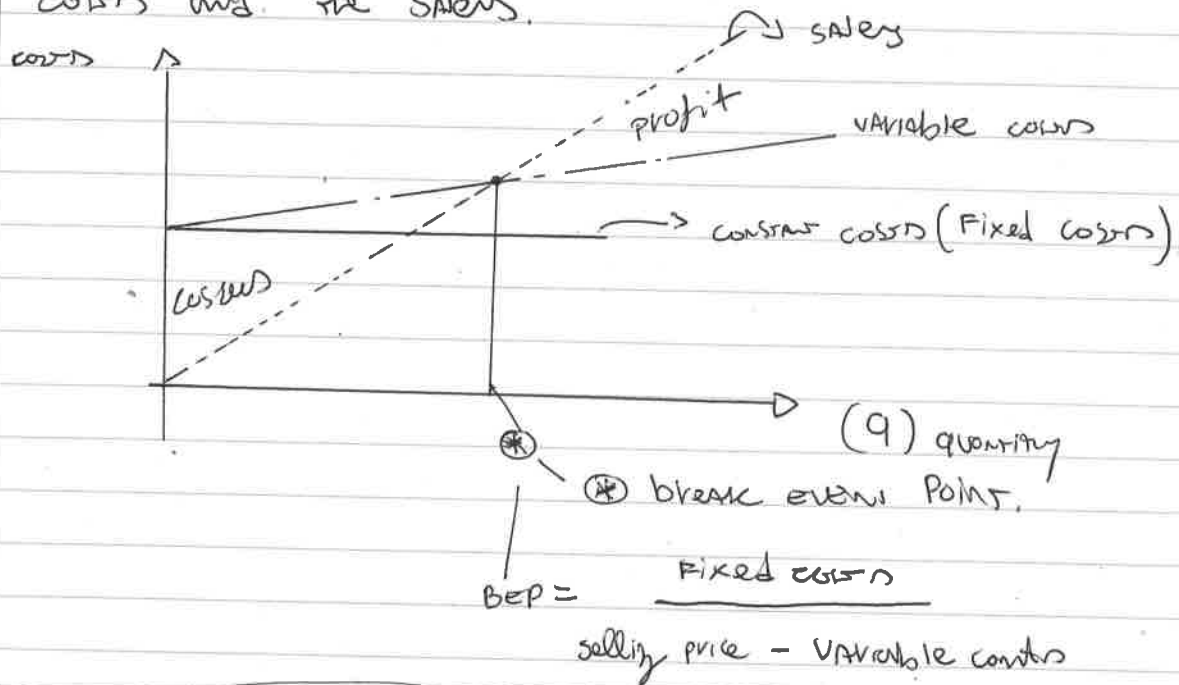
- IS the MACHINE we are looking FOR the best one in the MARKET?
 - how LONG, will we using this MACHINE?
 - IS THIS MACHINE requires TOO MUCH MAINTENANCE?
- (AUTOCLAVE)
- how MANY PARTS ARE we PLANNING ^{to} ~~out~~ PRODUCE? IS IT WORTH IT OR NOT? TO UNDERSTAND much more in depth THIS problem a specific COST ANALYSIS should be done. considering

all the costs that "SUMMO" the machine.

→

c) 3/10

The following graph shows the Fixed costs, Variable costs and the Sales.



① cost of Transport $\Rightarrow$ As the autoclave is a big machine will require a specific van, Transport system.

$\rightarrow$ cost of installation $=$ As Skelty Card is not confident in big manufacturing machine, a specific team of machine workers will be required to mount the machine. Autoclave in their site.

$\rightarrow$ Tools $\Rightarrow$ tools are usually sell Apart, at extra price.

6/12

Section A.

(Q 1)

Down to Earth. (special light sensors.

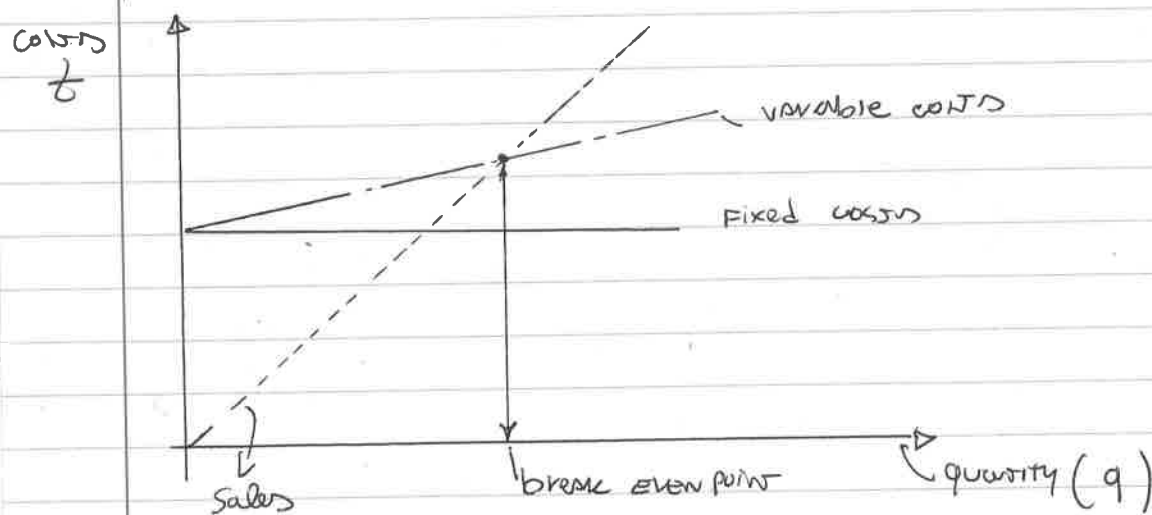
Fix costs = £500,000 ^{year} per annum.

Variable costs = 7 £ per unit

The company can produce 60,000 units / annum
year

Selling price = 20 £ per unit

Break Even Point graph

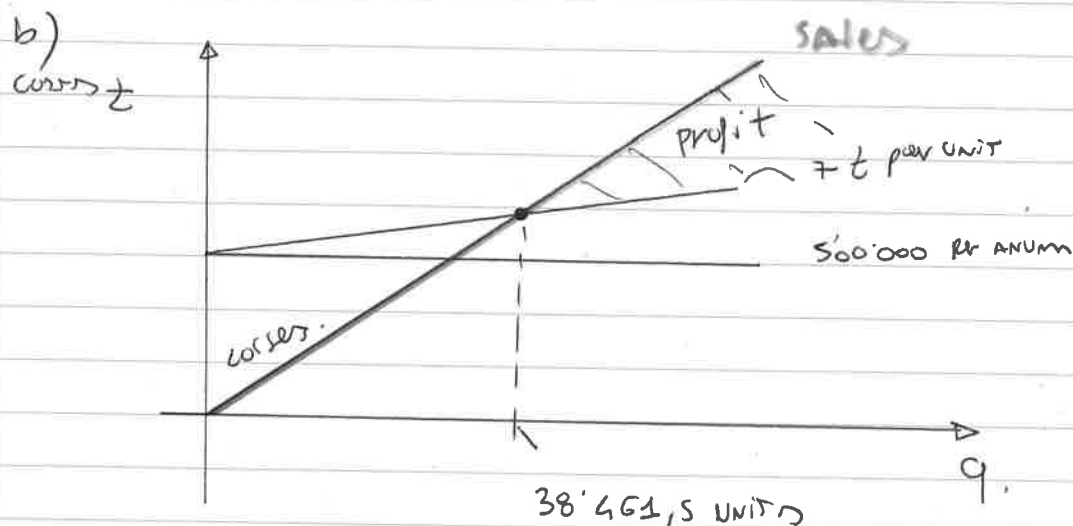


$$2) \quad \text{BEP} = \frac{\text{Fixed costs}}{\text{selling price per unit} - \text{Variable costs}} = \frac{500,000 \text{ annum}}{20 - 7 \text{ £}}$$

$$= \frac{500,000}{20 - 7} = 38,461.5$$

UNITS per
ANNUM.

a) 4/4



c) Margin of Safety

$$\text{MoS} = 45'000 - 38'461,5 = 6'538 \text{ UNITS}$$

d) Annual output

$$\text{From } 60'000 \text{ To } 60'000 \cdot 75\% = 45'000$$

$$20 \text{ £ per unit} \Rightarrow$$

$$\text{PROFIT (not considering reunits)} = 20 \cdot (45'000) = 900 \cdot 10^3 \text{ £}$$

$$\begin{aligned} \text{Effective Profit} &= (900 \cdot 10^3) - \left(\overbrace{500'000}^{\text{Fixed costs}} + \overbrace{(7 \cdot 45'000)}^{\text{Variable costs}} \right) \\ &= 900 \cdot 10^3 - (815'000) \\ &= 85'000 \text{ £} \end{aligned}$$

e) Using break even analysis. we have an idea of
When we are starting going profit,

9/5.

19
25.



Question No.

Examiner O

Arholwr yn unig

hif y Cwestiwn