UNIVERSITY of York

Module Code:	**MAN00023M**
Module Title:	**Managerial Economics**
Module Leader:	**Nick Huberts**
Open/Closed Assessment:	**Open Resit**
Maximum Word Count:	**No word count required**
Release Date:	**TBC**
Submission Deadline:	**TBC**
Weighting:	**30%**

Important information

A penalty of **five** marks will be deducted for late submissions that are made within the first hour after the deadline. Submissions that are more than one hour late but within the first 24 hours of the deadline will incur a penalty of **ten** marks. After the first 24 hours have passed, **ten** marks will be deducted for every 24 hours (or part thereof) that the submission is late for a total of 5 days. After 5 days it is treated as a non-submission and given a mark of zero. The consequences of non-submission are serious and can include de-registration from the University.

If you are unable to complete your open assessment by the submission date indicated above because of Exceptional Circumstances you can apply for an extension. If unforeseeable and exceptional circumstances do occur, you must seek support and provide evidence as soon as possible at the time of the occurrence. Applications must be made before the deadline to be considered.

Full details of the Exceptional Circumstances Policy and claim form can be found here: https://www.york.ac.uk/students/studying/progress/exceptional-circumstances

If you submit your open assessment on time but feel that your performance has been affected by Exceptional Circumstances you may submit an Exceptional Circumstances Affecting Assessment claim form by 7 days from the published assessment submission deadline. If you do not submit by the deadline indicated without good reason your claim will not be considered.

Please take proper precautions to safeguard your work and remember to make backup copies of your data. The University provides all its students with storage space on the University server and you should save and back up any work in progress on this server on a regular basis. Computer failure and theft of your equipment or storage media are not considered exceptional circumstances and extensions cannot be granted for work lost for these reasons.

Word count requirements

There is no word count for this assignment.

You may leave the space on the front of your assignment where you are asked for the word count blank.

The main text for this assignment must be word-processed in Arial, font 12, <u>double</u> spacing, minimum 2cm margins all around.

Important information

- The summative part of the coursework consists of 5 questions, each bearing 10 marks. You need to answer all 5 questions. This part is the coursework for this module and counts towards 30% of your final mark.

- The summative part covers the material treated in Lectures 3-7. The formative part covers the material treated in Lecture 1 and Lecture 2.

- The questions are personalised. This means that the parameters used in the exercises are based on the last three digits of your exam candidate number. This number is of the form Y40xxxxx or Y3xxxxxx, ie do not use the number that starts with 207xxxxx or 206xxxxx.

- Answers can be both hand-written and typed. If you choose to answer (part of) the questions hand-written, make sure that we can read your answers. You may submit **one** document in **pdf** only.

- There is no word limit. You do not need to provide a word count.

- You need to add a cover page, but you can leave the sections "word count" and "essay title" blank. When adding a cover page, submit one pdf file. Do **not** submit separate files.

- For the benefit of anonymisation, please do not put your name and students number (Y207xxx) on your submission. However, make sure your candidate number (Y40xxxx or Y39xxxx) is on it.

- The name of the file: it should at least contain your candidate number and "Managerial Economics". For further guidance, read the assessment brief on the VLE or contact the assessment office.

- The module team will not answer queries about how to solve exercises, but feel free to contact us for any other queries. For question regarding the submission process, please contact the assessment office.

- Make sure that you submit before the deadline. We recommend you finish the assessment at least 12 hours before the deadline so that you have enough time to upload your answers in case of technical difficulties. There is no limit on the number of times you can overwrite your submission as long as you upload your latest document before the deadline.

- After submission has been completed check that you have submitted the *correct* file. You will **<u>not</u>** be allowed to upload the correct document after the deadline has passed in the scenario you uploaded the wrong file (or when you submitted the cover page separately). <u>Your mark will be 0.</u>

- Please read further information on the VLE.

Example: if your exam candidate number is Y4012345, then a=3, b=4, and c=5.

Question 1

Consider the following demand curve

Suppose that currently the price on the market is P=4 and the resulting quantity demanded is *a*, where *a* follows from your student number. You may assume that at this price level the quantity supplied is at least the quantity demanded.

   a) Give the values of a, b, and c that follow from your candidate number. (0 marks)

   b) At this price level, if *a* units are sold, calculate the total consumer expenditure.

                                                                                                (2 marks)

   c) Calculate the point price elasticity of demand.   (4 marks)

   d) At this price level, is demand price elastic or inelastic?   (2 marks)

   e) For the total consumer expenditure to increase, should the price on the market increase or decrease?   (2 marks)

Question 2

Explain by means of diagrams how the price-consumption curve is different for goods that are perfect substitute and goods that are perfect complements.　　(10 marks)

Questions 3

Consider the following production function that depends on Labour, Capital, and Materials

$$Q = F(K, L, M) = \min\left\{\frac{K}{4}, L, M\right\}.$$

a) Calculate the quantity produced for K=8, L=1, M=2.　　　　　　　　(3 marks)
b) If the wage rate is w = $(c + 2)$ where c follows from your student number, the rental rate of capital is r = $20, and the materials costs per unit M are set to m=½ rK, find the cost minimizing mix for producing 2 units (ie C(2)).
　　　　　　　　　　　　　　　　(4 marks)
c) Are the inputs complements or substitutes? Explain your answer.　(3 marks)

Question 4

Consider a monopoly with the following inverse demand function
$P = 12 - 1.6Q$, the marginal revenue is $MR = 12 - 3.2q$, a marginal cost $MC = 2Q + (b + 1)$, and AC = Q+(b+1) where b follows from your student number. You may assume that TFC=0.

a) Derive the total revenue function.　　　　　　　　　　　　(1 marks)
b) Find the monopoly profit maximising price and quantity.　　　(3 marks)
c) Find the consumer surplus.　　　　　　　　　　　　　　　(3 marks)
d) What would the equilibrium price be if this was a perfectly competitive market?
　　　　　　　　　　　　　　　　(3 marks)

Question 5

A market is characterised by the following demand function $Q = 90 - P$. Two firms are faced with identical marginal cost functions $MC_i = (b + 10) + Q_i, i = 1,2$ where b is derived from your student number. The total quantity demanded is given by $Q = Q_1 + Q_2$. The cost function for each firm is $C_i = (10 + b)Q_i + 1/2Q_i^2$.

  a) Now assume that the firms start competing 'a la Cournot'. Find the reaction function for each firm.   (4 marks)
  b) What is the total industry output under Cournot?   (3 marks)
  c) Suppose the government introduces a price ceiling of P=60. Find a combination of quantities Q_1 and Q_2 that constitute a Cournot-Nash equilibrium.
                                                                                 (3 marks)

Total   **50 marks**

END OF ASSESSMENT.