

UNIVERSITY OF SWAZILAND
FACULTY OF SOCIAL SCIENCES
DEPARTMENT OF ECONOMICS

RE-SIT/SUPPLEMENTARY EXAMINATION PAPER: JULY 2018

TITLE OF PAPER: MICROECONOMICS II

COURSE CODE: ECO 204

TIME ALLOWED: TWO (2) HOURS

INSTRUCTIONS:

- 1. ANSWER QUESTIONS ONE (1) AND ANY TWO (2) QUESTIONS OF YOUR CHOICE.**
- 2. QUESTION (1) CARRIES FORTY (40) MARKS AND THE OTHER QUESTIONS YOU WILL CHOOSE CARRY THIRTY (30) MARKS EACH.**
- 3. NON- PROGRAMMABLE CALCULATORS ARE ALLOWED.**
- 4. WHERE NECESSARY, FIGURES ARE TO BE ROUNDED UP TO TWO (2) DECIMAL PLACES.**

THIS QUESTION PAPER IS NOT TO BE OPENED UNTIL PERMISSION HAS BEEN GRANTED BY THE INVIGILATOR

QUESTION 1 – COMPULSORY**(Total =40 Marks)**

- a) Define a natural monopoly (5)
- b) Discuss the long-run equilibrium for a monopolistic competition. (7)
- c) Write short explanatory notes on the Stackelberg behaviour. (5)
- d) Write short explanatory notes on profit maximization under Monopsony (8)
- e) Compare and contrast graphically the equilibrium analysis for a perfectly competitive firm and monopoly in the short-run. Also show explicitly mathematically, how profits are maximised in each market. (15)

ANSWER ANY TWO (2) QUESTIONS FROM THE FOLLOWING:**QUESTION 2**

Two firms in Matsapha produce cheese that has the same taste. These firms are Parmalat Swaziland and Nutriday Swaziland. The profit of each firm depends on its own output level and that of the rival firm, and these profit functions are expressed as follows:

$$\Pi_p = 24Q_p - Q_p^2 - 2Q_n^2 - 8$$

$$\Pi_n = 30Q_n - 3Q_n^2 - 2Q_p - 9$$

- i) What kind of market structure are the two firms operating in? (5)
- ii) What will be the output level in each firm? (10)
- iii) Derive the profit for each firm. (5)
- iv) Calculate the firm's profit and output levels if these two firms collude / form a cartel in order to maximise joint profits. (10)

QUESTION 3

Write short explanatory notes on the following concepts:

(5 marks each)

- i) Short-run supply curve under perfect competition.
- i) Prove mathematically that for a monopolist, the marginal revenue is always below the demand curve.
- ii) Differentiate between Cournot behaviour and Bertrand behaviour.
- iii) In the short-run a perfectly competitive firm will continue with production even though it cannot cover all its average costs. Graphically illustrate and explain the condition under which this statement is true.
- iv) Cartel
- v) What forms the basis for monopoly power?

QUESTION 4

The cost function for a perfectly competitive firm in the short-run is given as follows:

$$C = Q^3 - 5Q^2 + 100Q + 180$$

- i) Calculate the profit maximizing output level for this firm if $P = \text{E}120$. (10)
- ii) Derive the supply function for this firm and explicitly show the boundaries of the supply function. (15)
- iii) Provide a rough sketch of the supply function you derived in ii). (5)

*****GOOD LUCK*****