



**THE OPEN UNIVERSITY OF SRI LANKA
CERTIFICATE IN ENTREPRENEURSHIP & SMALL BUSINESS MANAGEMENT
PROGRAMME**

**LEVEL 02 – FINAL EXAMINATION – 2018
MCC1103 – BASIC STATISTICS & ECONOMICS
DURATION – TWO (02) HOURS**

Date: 21.10.2018

Time: 10.00 a.m – 12.00 noon

General Instructions

1. Answer two (02) questions from PART 'A' and TWO (02) questions from PART 'B'.
2. It is advisable to spend one hour for each part.
3. Provide answers for each part separately in separate answer books and hand over them separately.
4. Graph papers will be provided.
5. Non programmable calculators are allowed.
6. All questions carry equal marks.

PART A

- (1) (i) What are the basic economic questions. Explain (5 marks)
- (ii) Compare the free market economy with the command/planned economic system. (8 marks)
- (iii) Using a production possibility frontier indicate the following.
 - a) Economic growth
 - b) Opportunity cost
 - c) Inefficient level of production
 - d) Unattainable level of production (4 x 3 marks = 12 marks)
- (2) (i) What is the "Law of Demand"? Use illustrations to explain your answer. (7 marks)
- (ii) Using examples differentiate between movement along the supply curve and movement of the supply curve. (Explain your answer using illustrations) (6 marks)

(iii) Using the Demand and Supply analysis Explain the likely changes in the respective market under the following given condition. Use illustration to explain your answer.

- a) Price of gas cylinder has gone up. Market for gas cylinder.
- b) Price of rice has gone up. Market for bread.
- c) Income level of people has gone up. Market for washing machines.
- d) Drought has affected the tea growing areas. Market for tea.

(4 x 3 marks – 12 marks)

(3) (a) What are the main characteristics of a monopolistically competitive market.

(5 marks)

(b) Firms that operate in the perfectly competitive market has the ability to set the price in the market? Do you agree explain.

(8 marks)

(c) Do you agree or disagree with the following statements. Explain using illustrations.

(i) Economics of scale is not a barrier to entry in to the monopolistic market.

(ii) Firms that operate in the Monopolistically Competitive Market use advertising to promote their products.

(iii) There are small number of buyers & sellers in the Perfectly Competitive Market.

(iv) Firms that operate in the Oligopolistic market decide the market price in agreement.

(4 x 3 marks – 12 marks)

PART B

Answer 2 questions only

Question 4

a) Solve the following equations:

(i) $25x + 2 = 10(x - 5)$ (3 marks)

(ii) $\frac{3x}{11} - \frac{x}{4} = 2$ (2 marks)

(iii) $\frac{x+5}{x-8} = \frac{3}{2}$ (3 marks)

b) Solve the following simultaneous equations: (3 marks)

$$2x + y = 35$$

$$3y = -x + 6$$

c) Find the solution of $4x^2 + 30x - 15 = 0$ (5 marks)

d) If $x = 1$, $y = -1$ and $z = -2$, then find the value of the following expression.

$$\frac{\{[x - (2y + x^2) - z] + (x - z)^2\} x + y^2}{(x-2)^2 - z}$$
 (4 marks)

e) In a school, there are 880 students in total. If there are 20% more boys than girls, find the number of boys and girls in the school. (5 marks)

(Total 25 marks)

Question 5

a) Briefly describe the 4 data collection methods used in surveys. (4 marks)

b) Describe an advantage and disadvantage for each method mentioned above. (4 marks)

c) Briefly describe the following with suitable examples:

(i) Discrete vs. continuous data (4 marks)

(ii) Population vs. sample (4 marks)

d) Using suitable examples, briefly describe how a sample can be obtained from a population in the following methods:

(i) Simple random sampling (4 marks)

(ii) Stratified sampling (5 marks)

(Total 25 marks)

Question 6

A) A dairy production company has summarized the annual production cost values for 15 years, as shown below.

Annual cost (Rs.)	Number of years
100,000 upto 125,000	2
125,000 upto 150,000	1
150,000 upto 175,000	5
175,000 upto 200,000	4
200,000 upto 225,000	2
225,000 upto 250,000	1

a) Construct the following for the above data.

(i) Histogram (5 marks)

(ii) Frequency Polygon (3 marks)

b) Find the following measures for the above data.

(i) Mean (2 marks)

(ii) Median (4 marks)

(iii) Mode (4 marks)

B) Plot the graph for $y = 9x - 4$ (where x values range from -3 to 3). (7 marks)

(Total 25 marks)

Appendix

$$\text{mean} = \bar{x} = \frac{\sum fx}{\sum f}$$

$$\text{Median} = L + \frac{\frac{n}{2} - F}{f} \cdot c$$

$$\text{Mode} = L + \frac{d_1}{d_1 + d_2} \cdot c$$

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