



**MACHAKOS UNIVERSITY**  
**University Examinations for 2019/2020 Academic Year**

**SCHOOL OF BUSINESS AND ECONOMICS**  
**DEPARTMENT OF BUSINESS ADMINISTRATION**  
**..... YEAR SECOND SEMESTER EXAMINATION FOR**  
**DOCTOR OF PHILOSOPHY IN BUSINESS.**  
**BBA 920: ECONOMIC ANALYSIS FOR BUSINESS DECISIONS**

**DATE:**

**TIME:**

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**INSTRUCTIONS:**

**QUESTION ONE (COMPULSORY) (24 MARKS)**

- a) An economic Research centre has published data on the GDP and the demand for Refrigerators as presented in the table below;

Year	2011	2012	2013	2014	2015	2016	2017
GDP (in N billions)	20	22	25	27	30	33	35
Refrigerators Demand (Millions)	5	6	8	8	9	10	12

**Required:**

- i. Estimate the regression equation  $R=a+bY$  where; R= demand for refrigerators in millions, Y= GDP in N billions. (6 marks)
  - ii. Forecast the demand for refrigerators for the years 2018, 2018 and 2020 if the research centre projects the GDP to be N40, N52 and N65 billions respectively. (3 marks)
- b) In an article about the financial problems in Kenya today, the Daily Nation Newspaper reported that the paper was losing about Kshs 20 million a year. A Wall street Analyst said that the Paper should raise its price from kshs 60 to kshs 80, which he estimated would bring in an additional kshs 65 million a year. The Paper's Publisher however, has rejected the idea

arguing that the circulation could drop sharply after a price increase citing the East African Newspaper's experience after it increased price to kshs 85.

- i. What implicit assumptions are the Analyst and the Publisher making about price elasticity? (3 marks)
  - ii. How is the concept of elasticity useful in guiding management with regard to deciding the viability of adjusting prices for goods and services? (4 marks)
- c) Says Law, Wage –Price flexibility, Real theory of interest and Quantity theory of money are the key pillars of classical macroeconomic analysis. Describe how classical economists used these pillars to explain issues afflicting the economy. Advance the Keynesian critique of each of the pillars of classical macroeconomics. (8 marks)

#### **QUESTION TWO (12 MARKS)**

- a) A monopoly firm faces two markets A and B with two different demand functions as follows:  $Q_a = 16 - 0.5P_a$  and  $Q_b = 22 - P_b$ . Suppose the firm's total cost function (TC) is given as:  $TC = 10 + 2Q + Q^2$ . Determine the firm's profit maximizing output and the amount of output that the firm will sell in each market so as to maximize profit in each of the markets. Explain the conditions necessary for price discrimination. (8 marks)
- b) "Quantity demanded is a function of price" Carefully discuss this statement. (4 marks)

#### **QUESTION THREE (12 MARKS)**

- a) Explain the meaning of macroeconomic models and discuss the major types of macroeconomic models (4 marks)
- b) Suppose aggregate demand and potential output are respectively given as:  
Aggregate demand:  $Y = 4000 + 2000/P$  where  $Y$  = Actual Output and  $P$  = Price level  
Potential Output :  $Y^* = 5000$ .
- i. Assuming prices are sticky at  $P=1$ , what is the level of actual output? Is there pressure on prices to move upwards or downwards? (2 marks)
  - ii. What is the level of prices  $P$  if prices are flexible? (2 marks)

- iii. Suppose prices are sticky at  $P=3$ , what is the level of actual output? Is it above or below potential output? What pressure is on the prices? (2 marks)
- c) Carefully distinguish between the consumer price index (CPI) and the GDP deflator. (2 marks)

#### QUESTION FOUR (12 MARKS)

- a) A project costs Kshs 250,000 now and is expected to generate at the year-end cash inflows of Kshs 90,000, 80,000, 70,000, 60,000 and 50,000 in years one (1) to five (5). The opportunity cost of capital is 10%. Evaluate the feasibility of the project using NPV approach (5 marks)
- b) Briefly explain how the following influence the structure of the firm:
- i. Product differentiation (2 marks)
  - ii. Entry conditions (2 marks)
- c) Briefly explain how a firm can determine the optimal use of inputs in the short run. (3 marks)

#### QUESTION FIVE (12 MARKS)

The following equations relate to the Kenyan economy in mid 2019.

$Y = C + I + G + X$  (Income Identity)

$C = 100 + 0.9Y^d$  (Consumption Function)

$I = 200 - 500r$  (Investment Function)

$X = 100 - 0.12Y - 500r$  (Net Exports)

$M = 0.8Y - 2000r$  (Real Money Demand)

$G = 200$  (Government purchases)

$t = 0.2$  (Tax Rate)

$L = 800$  (Real Money Supply)

- a) Derive equations for the product and money market equilibrium conditions and interpret them (2 marks)
- b) Determine the  $r$  and  $y$  pairs at which the two markets are simultaneously clearing (2 marks)

- c) Compute the monetary and fiscal policy multipliers and interpret them (4 marks)
- d) Suppose equilibrium income increases by 400, by how much must real money stock increase for the new level of income to be in equilibrium?. What do you think could be behind such increase in income?  
(4 marks)