

**UNIVERSITY OF YAOUNDE I
ECOLE NORMALE SUPERIEURE ANNEXE DE BAMBILI
COMPETITIVE ENTRANCE EXAMINATION 2002
ECONOMICS MAJOR TIME: 3 hours COEF 4**

INSTRUCTIONS: ATTEMPT ALL QUESTIONS IN THE WAY IN WHICH THEY APPEAR

1. List those theories that help to explain the slope of the normal demand curve.
2. Which technique is used in measuring the degree to which industries are concentrated in an area? How is it measured?
3. What problems are faced by international liquidity? What steps are taken by the IMF to resolve these problems?
4. Briefly explain with illustration the "cobweb theorem" with stable equilibrium. What conditions are necessary for this theory to apply in agricultural production?
5. Given the following information about a firm.

Q	0	1	2	3	4	5	6	7	8	9
TR	-	50	100	150	200	250	300	350	400	450
TC	110	140	162	175	180	185	194	219	260	325

- a) Is the firm producing under perfect or imperfect competition? Why?
 - b) What is its marginal revenue and fixed cost?
 - c) Calculate MC at all the levels of output.
 - d) What output will the firm produce and what are their profits?
 - e) What is the minimum price at which the firm will produce and the output in (i) short-run, (ii) long run
6. Define oligopoly. What is the singular most important characteristic of oligopolistic market?

7. Consider the following about an economy

Stock of money 60 million for each franc changes hands on an average of 3 times per year, with 30 million transactions carried out per year.

- a) Determine the average price level
- b) List two reasons for the rate at which money changes hands.
- c) List two criticisms against this method of determining the price level.

8. a) what would happen to the value of the GNP if the value of the intermediate products were included? How can this be avoided?

b) People fear that banks will collapse, so they withdraw their savings and buy government bonds. How does this affect the GNP?

SECTION II

SOURCED QUESTIONS FROM THE UNIVERSITY OF BAMENDA

PART ONE

- 1) Name any two languages used in economic studies. (2 words)
- 2) Which aspect of economics makes it a pure science? (2 words)
- 3) State the first order condition for consumer equilibrium in the cardinal utility approach.
- 4) What do you understand by Marginal Rate of Substitution?
- 5) The income elasticity of banana is given as 0.75. Interpret this result and say what kind of good banana is. (a sentence)
- 6) What do you understand by an input?
- 7) Under which time period can production technology be varied?
- 8) What is another name for Isoquant?
- 9) What causes the isocost to shift outward to the right if the prices of input are given? (a phrase)
- 10) What name do you give to a producer who charges different prices to different consumers for the same good?
- 11) State the first and second order condition for equilibrium in a perfectly competitive firm in the short-run.
- 12) How do you determine whether two goods are substitutes?
- 13) What is the relationship between Total Product and Marginal Product in stage I? (a phrase)
- 14) List any two subjects from which economics emerged

- 15) What do economists use to represent the complexity of the real world? (1 word)
- 16) What is the second order condition for consumer equilibrium in the cardinal utility approach?
- 17) Coffee and Tea are substitutes, what is the shape of the demand curve for tea if the price of coffee increases?
- 18) MRS is to consumption as MRTS is to..... (1 word)
- 19) What is the implication of the negative slope of an indifference curve? (a phrase)
- 20) What factor of production does not change in the long run?
- 21) Given the Total Cost as C, price of labour (L) as P_L and price of Capital (K) as P_K , write down the equation of the isocost curve.
- 22) What gives demand analytical precision?

WRITE T FOR THE CORRECT STATEMENT AND F FOR THE WRONG ONE(23-36)

- 23) There cannot be a market without a place.
- 24) Both rich and poor, developed and underdeveloped do not face the same basic economic problems.
- 25) The law of demand applies in all cases in economies.
- 26) At a given price, two parallel demand curves have the same point elasticity.
- 27) A less than zero income elasticity indicates that with an increase in income, consumption of a product decreases.
- 28) Utility is not an absolute concept.
- 29) At equilibrium, MU derived from all goods consumed by a consumer is the same if price is the same.
- 30) A consumer is a single individual who acts in isolation in decision making.
- 31) All non-economic resources command no price.
- 32) Ideology determines the functioning of any economy.
- 33) The long run average cost curve is a planning curve.
- 34) A firm maximizes profit each time $MC=MR$
- 35) A firm should close down if it cannot cover its fixed costs.
- 36) The supply curve of a monopolistic firm is the rising section of the Average Cost curve.
- 37) Name the most economical language of economics
- 38) The income elasticity of demand for X is given as 0.85. What type of good is X? (2 words)
- 39) What is the area between ridge lines? (4 words)
- 40) Why is the demand curve of an imperfect competitive market more elastic than that of a monopolist?
- 41) Give one condition for successful price discrimination.

- 42) Which costs are ignored whether or not production takes place?
- 43) What limits the consumer from attaining the highest indifference curve?
- 44) At what level are micro and macro-economics related?
- 45) What is the first order condition for profit maximization in a perfect competitive firm?
- 46) Which group of economist regarded economics as the study of scarcity?
- 47) Which group of economist introduced the notion of welfare in the study of economics?
- 48) How is the classical definition of economics different from the neoclassical definition?
- 49) Which two approaches are used in economic theorising?
- 50) Which is the most economical language of economics?

PART TWO

- 1) The demand for Chinese shirts in the USA is expressed as $Q_d = 15\,000 - 500P$, while the supply of these shirts in china is expressed as $Q_s = 1000P$. All prices are expressed in US dollars (Q_d and Q_s demand and supply respectively and P is the price).
 - a) What do 500 and 1000 in the demand and supply functions signify?
 - b) What is the significance of the minus sign before 500 in the demand function?
 - c) Determine the equilibrium price of shirts in the USA.
 - d) How many shirts will the Chinese sell at the equilibrium price?
 - e) If the government of china fixes the price of the shirt at 15 US dollars, what pricing policy has it adopted? Determine how many shirts will be demanded at this price.
 - f) What are the likely problems to be encountered with the policy adopted in (e) above?
 - g) Give any two factors that may lead to a fall in the demand for shirts in the USA.
- 2) Given that the market demand for sweet potatoes in Bambili is given as: $D_x = 800 + 100P_x$, while the supply function is given as: $S_x = 200P_x - 400$, where D_x , S_x , and P_x are respectively the demand, supply and price of potatoes (X). Assume that there are 100 identical consumers and the same identical producers of potatoes.
 - a) Interpret the negative sign before P_x in both functions.
 - b) What is the significance of 100 before P_x in the demand function and 200 in the supply function?
 - c) What is the market demand function and market supply function of potatoes in Bambili?
 - d) What are the market quantities and price of potatoes in Bambili? (show this mathematically)
 - e) What is the price elasticity for potatoes in Bambili?
 - f) Is the equilibrium in this market stable? Why or why not?

- g) What if the government established the price of potatoes below the market prices?
- 3) The Minister of Trade of a country has realized that the price of Rice, a basic commodity is rising above the affordable income of a majority of the citizens.
- a) What pricing policy would you advice the Minister to adopt and why?
- b) Explain carefully, using a well labelled diagram, how this policy work and show its likely consequences.

In a problem a student calculated the price elasticity of demand of a product 5.

- a) Interpret this result and say what kind of good this product is.
- b) Distinguish carefully between a change in demand and a change in quantity demanded, illustrating your answers with well labelled diagrams.
- 4) The following information relates to a firm under perfect competition. $TC=4Q+2Q^2$; $AR=12$
- a) Determine the profit maximizing output.
- b) What is the firm's total profit?

Question 5 and 6 are based on the following information.

The AFC of producing 6 roofing sheets is 10500Fr, the AVC is 4000 and the AFC of 7 sheets is 9000Fr. Where AVC is 3800Fr.

- 5) What is the marginal cost of increasing the output from 6 to 7?
- 6) What is the total cost of producing 6 sheets?
- 7) Which of the following is not necessary for price discrimination?
- a) Different elasticity in different markets
- b) Market segmentation
- c) Market branding

Questions 8, 9 10 and 11 are based on the following table which shows the relationship between employment (L) and output (TPL)

L	0	1	2	3	4	5	6	7	8	9
TPL	0	3	8	12	15	17	17	16	13	11

- 8) At what level of output is marginal product of labour highest?
- 9) At what level does the law of diminishing returns for labour begins to operate?
- 10) Identify the range of employment within which a rational producer will produce?
- 11) Where does the third stage of production begin?

Questions 12, 13 and 14 are based on the following table.

Output(units)	0	1	2	3	4	5	6	7	8	9
Total revenue(000frs)	-	50	100	150	20	250	300	350	400	450
Total cost(000frs)	110	140	167	175	180	185	194	219	260	325

12) i) Calculate the Average Fixed Cost (AVC) when output is 5 units.

ii) What is AVC when output is 6 units?

13) Calculate the Marginal Cost (MC) and the Marginal Revenue (MR) when output is 8 units

14) a) In what market is the firm operating?

b) What output should the firm produce?

15) Distinguish between micro economics and macro economics.

16) What do you understand by "Liberizing the economy"?

17) Who is a monopolist?

Question 18 and 19 refers to the following information.

Mr NZOH resigns his job as a teacher on a salary of 80 000 per month.

His monthly purchases are valued at 280 000frs while his monthly sales are 365 000frs.

18) What is the value of Mr NZOH'S monthly implicit cost?

19) What are his monthly profits?

20) A competitive firm has the following level output = 60; market price = 10frs; Average total cost at maximum = 75frs

a) What is the marginal cost at this level of output?

b) Is the firm making profits?

c) Is it making maximum profits?

d) Should it produce more or less or stay the same?

21) Which technique is used in measuring the degree to which industries are concentrated in an area? How is it measured?

22) Define oligopoly.

23) What relationship exists between the APP and the AVC curves?

24) In one sentence define **EXTERNALITIES**.

25) Define X- inefficiency

26) What is breakeven point?

27) a) What is meant by monopoly power?

b) State four advantages of monopoly.

c) List four disadvantages of monopoly.

d) Name four differences between a monopoly and a perfectly competitive firm.

e) Define the term concentration ratio.

Given the price function of a firm as: $P=24 - 1.5Q$ and the Total Cost function as:

$$TC = 8 + 4Q + 0.5Q^2$$

i) Find the Total Revenue (TR) function.

ii) Calculate the Marginal Cost (MC) function.

iii) Calculate the Average Cost (AC) function

iv) Using the MC and AC functions; find the average cost minimizing output and what is the AC at this level of output?

v) Using the output range of 0 to 10 draw up a table to show the following: TFC, TVC, TC, TR, MR, MC, AC, AR and profit at each level of output.

vi) Under which market structure is this firm operating? Justify.

SECTION III