# CERTIFIED PUBLIC ACCOUNTANT

# FOUNDATION LEVEL 2 EXAMINATIONS

# F2.2: ECONOMICS AND THE BUSINESS ENVIRONMENT

# DATE: THURSDAY 27, APRIL 2023

# MARKING GUIDE AND MODEL ANSWERS

## QUESTION ONE

### Marking guide

| Answer | Marks |
|---|---|
| Qn. 1.a) (i) - If a candidate identifies a correct type of the good, they will earn 2 marks. If the good is well explained will earn 2 marks. | 4 |
| Qn. 1.a) (ii) - Interpretation on how each component influences demand earns 2 marks. | 12 |
| Qn. 1 (b) Each given consequence of price ceiling earns 1 mark | 4 |
| **Total marks** | **20** |

### Model answers:

**a) i) To identify and explain the type of good.** This is an inferior good. It is analyzed from the substitution perspective. It is circumstantial that a consumer even though his income increases, out of a variety of goods to make a choice, the consumer might see another good as a potential substitute of the one he held. Therefore, for some inferior goods, the changes would be in the reverse direction so that a rise in income produces a fall in demand.

**ii)**The quantity demanded of any product (Q) is a function of dependence upon the following as per the question:

- Its own price (Po): The price of the product itself determines the quantity of it to be demanded. A higher price might attract a lower quantity considering other factors constant.
- The prices of other goods (Pa): Taking an example, an increase price of beans might attract an increased demand for peas. Because the two products serve the same purpose. Therefore, a consumer will not spend much on a product when he can acquire another one that will contribute to his satisfaction.
- disposable income (Yd): Once a customer has saved an amount from his income, he has the freedom to purchase a product depending on the level of income he holds at hand.
- Market size (N): The supply of products in a market will determine their level of consumption. If there is a variety of products in the market this will lead to a fall in the prices hence reducing their demand
- Marketing effort (A): Suppliers will ensure that their product is marketed to the attraction of customers and this allows its improved demand.
- Customer taste (T). The preference of a product to the customer determines its demand. Therefore, each component above as stipulated in the equation is a factor that determines the quantity demanded of a product in a market when other factors are considered constant.

**b) Four consequences of price ceiling?**

- ✓ Hoarding and smuggling of products to other countries where prices are relatively high. This will further create artificial shortages. Producers do this to attract improved profits elsewhere.
- ✓ Black market arise which involves selling a product at a price other than the legislated/ statutory price (in an illegal market) preferably to those willing to pay higher prices.
- ✓ Low investments as producers are not allowed to maximize their profits and may opt to invest in industries whose product prices are not controlled.
- ✓ Loss of foreign exchange arising from importation of essential commodities whose domestic supply is insufficient.

**QUESTION TWO**

**Marking guide**

| **Answer** | **Marks** |
|---|---|
| Qn. 2 (a) Each given Samuelson's distinct view on profit earns 2 marks. | 12 |
| Qn. 2 (b) An identification of the owner earns 2 marks and well explanation earns 2 marks. | 4 |
| Qn. 2(c) A well-drawn consumer surplus curve earns 2 marks. Interpretation of the curve earns 2 marks. | 4 |
| **Total marks** | **20** |

**Model answers:**

**a) Samuelson's six identified distinct views on profit**.

- ✓ Profit is seen as a balancing item and a result of accounting conventions but should properly be seen as a return to one or more of the production factors. For example, most of what accountants show as the "profit" of the majority of small family firms would better be described as the proprietor's wage for his physical and mental effort and interest on his personal savings invested in the business.
- ✓ The second view sees profit as a reward to enterprise and innovation and a return for the temporary monopoly achieved by being first in the field with a successful new commercial idea.
- ✓ The third sees profit as a reward for successful risk-taking and, although willingness to take risks does not always (or often) bring compensating profits, it is usually the hope of earning such profits that provides the spur to help business people overcome their natural inclination to avoid risk.
- ✓ The fourth view simply takes the third view further; profit is a positive incentive to "coax out the supply of risk-bearing capital". It is the high return sought by providers of what is often known as "venture capital".

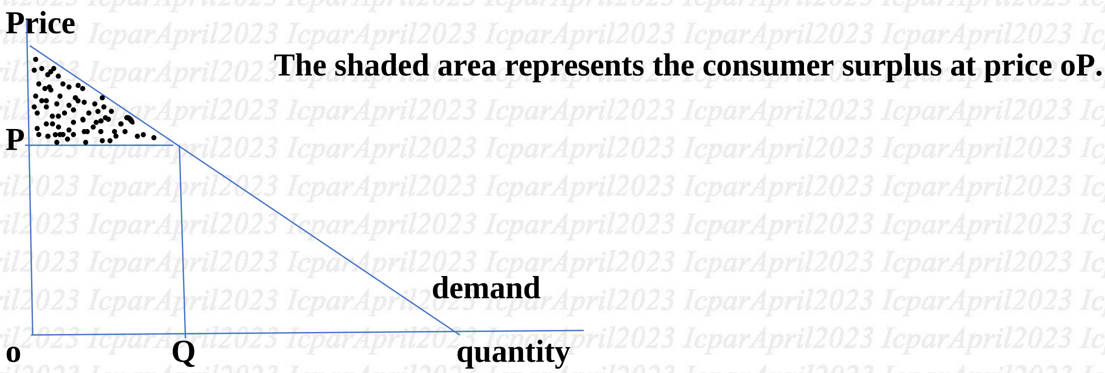
- ✓ The fifth view regards profit as a return to monopoly, whether natural or achieved by artificial means. It is this association of "abnormal" profit with monopoly that has colored so much teaching about business profits and objectives.
- ✓ The sixth view recognizes explanation of profit as surplus value which is properly the reward of the labor that created the value but which, in a capitalist economy, is appropriated by the owners of capital.

**b)**

- ✓ The profit is always attributed to the owners of the business who are normally termed as shareholders.
- ✓ It is a reward for the capital they have risked in investment.
- ✓ It is also a contribution to re-invest from the perspective of the owners intending to enlarge the capital and business.

**c)**

Graph 1: consumer's surplus curve




The Consumer Surplus is the difference between what a consumer would have been willing to pay for units of a good and what the consumer actually does pay.

The above graph shows a normal demand curve for a product the price of which is 0P. The fact that the demand curve extends to prices higher than 0P indicates that there are consumers who are willing to pay a higher price. However, if the price charged is 0P, then these consumers achieve a surplus which is represented by the shaded area.

## QUESTION THREE

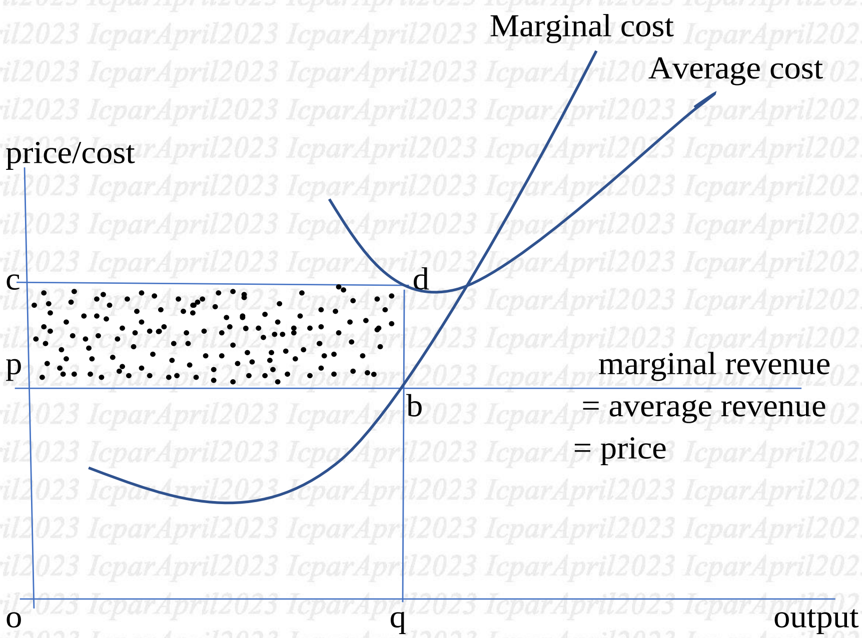
**Marking guide**

| Answer | Marks |
|---|---|
| Qn. 3 (a) A well-drawn diagram showing all features earns 3 marks. Interpretation of the diagram earns 5 marks. Conclusion on effect of the firms earns 2 marks. | 10 |
| Qn. 3 (b) Listing each condition earns 0.5 marks. Correctly explaining each condition earns 1.5 marks. | 10 |
| **Total marks** | **20** |

**Model answers:**

**(a) Diagram indicating the movement towards equilibrium in perfectly competitive markets.**

Graph 2: Equilibrium in Perfect competitive market curve




If we assume that the firm is experiencing diminishing marginal returns and can sell all it can produce at the market price, over which it has no control, then it will have average and marginal cost curves and an average revenue curve as shown in the above diagram. At all levels of output price, average revenue is below the average cost curve. However, the profit-maximizing condition of marginal cost = marginal revenue is also the loss-minimizing condition, so the best output for the firm to choose is at Oq where marginal cost equals marginal revenue. At this output level, average cost at Oc is higher than average revenue at Op, so the firm suffers a loss equal to the shaded area cdbp. Therefore, many of such firms might exit the market due to loses.

**(b) Conditions for perfect competition.**

(a) **Goods Must Be Homogeneous:** This means that, in the perception of the buyer, all units of the goods offered by all suppliers are equally acceptable. The buyer is indifferent as to which unit he receives, as long as it conforms to any description adopted by, and understood in, the market.

(b) **Perfect Transport and Communications:** All consumers in the market must have the same information. Suppliers must have access to the same information about production factors and the technical conditions of production. No producer is in a more favored situation than any other.

(c) **Price Established Only by Market Forces:** No producer and no buyer is able to influence the price by his own actions, nor by actions agreed with other producers or buyers. There is no degree of monopoly power in the market.

(d) **Economic Motives:** Only The actions of suppliers and buyers are influenced only by economic motives. If buyers or sellers are influenced by a desire to support a charity or a political party the market will not be purely economic, however worthy the social motives.

(e) **No Barriers Limiting Market Entry and Exit:** Suppliers and buyers must be free to enter and leave the market as they choose and as they are guided by considerations of profit and utility. This is a very important element in any competitive market and in some modern models of market behavior, notably that of contestable markets, it is the most important consideration.

## QUESTION FOUR

### Marking guide

| Answer | Marks |
|---|---|
| Qn. 4 (a) A well explained alternative maximizing theory earns 3 marks and 3 marks for a well explained satisficing theory. | 6 |
| Qn. 4 (b) A well-drawn diagram of an economic rent in the market earns 5 marks. The interpretation of the diagram earns 3 marks. | 8 |
| Qn 4 (c) Elaboration of each degree earns 2 marks. | 6 |
| **Total marks** | **20** |

**Model answers:**

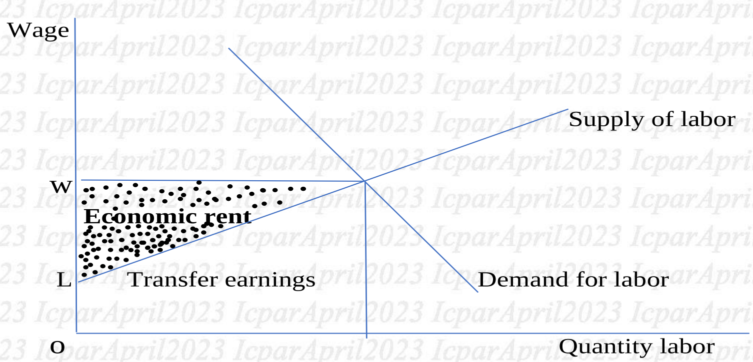
**a) Alternative Maximizing theories:**

The firm's objectives are really established by its professional managers, who are free to control the firm as long as they keep the shareholders satisfied with their dividends and the financial markets satisfied with their profits. Profit remains important - no one doubts that in a market economy - but it is not maximized to the exclusion of other aims that meet managerial ambitions. Managers like to operate in large firms because size brings prestige, high salaries and a range of other benefits, so these are pursued, to some extent at the expense of the profits belonging to shareholders. In the Baumol theory, revenue was seen largely as a way of measuring growth.

**Satisficing Theories:**

On the other hand, an economic theory of the firm should be concerned not only with how firms actually do behave but also how they should behave, if the economic goals of technical and allocative efficiency are to be achieved. Unfortunately, the alternative theories appear to suggest that if firms operate as they predict, they are likely to be less efficient in the full economic sense than if they pursue profit maximization - the desire to make the largest achievable profit consistent with market conditions.

**b) An economic rent in the market and its interpretation.**




**The economic rent is indicated in the shared area in the graph. oW shows the equilibrium price which actually represents the wage that induces the worker "c" to join the market as the rest of the workers are celebrating the wages on the supply curve.**

The economic rent curve presents the general wage levels in a labor market. It helps to identify at least the minimum wage levels that a worker cannot go below. However, the labor supply might dictate otherwise depending on the volume of job seekers which at times might even leave some unemployed. Therefore, the minimum wage rate available might determine whether the work will stay or if he or she will to search for other higher wages elsewhere. According to the graph above it shows the wage level (ow) that is given to all workers in the market. The labor supply curve indicates the minimum level at which a worker cannot go below. Thus, the economic rent shown in the shaded area on the graph.

**c)**

**First Degree Discrimination:** This is the most extreme form. Suppliers seek to charge each individual customer a price equal to his marginal utility, i.e., they will try to charge the highest price that each customer is prepared to pay. This is often called "haggling". Private houses (other than new houses) and second-hand cars are usually sold in this way.

**Second Degree Discrimination:** This is the term sometimes applied where a selected number of large customers are charged prices lower than could be justified on the grounds of any large-scale economies achieved. If a customer buys in bulk, then some price reduction is normal because the unit costs of selling, administration and transport are all likely to be lower.

**Third Degree Discrimination:** This is the term used to describe the situation where two or more separate markets can be identified and segregated. We can say, then, that, in order to gain from price discrimination in two different markets, price elasticity of demand at the relevant price range must be different. At the same time, price discrimination can be operated successfully only if the two markets can be kept completely separate.

**QUESTION FIVE**

**Marking guide**

| **Answer** | **Marks** |
|---|---|
| Qn. 5 (a) (i) Each working of a correct real output value earns 1.5 marks. | 3 |
| Qn. 5 (a) (ii), each working earns 0.5 marks and each correct percentage change result earns 0.5 marks. | 2 |
| Qn. 5(b) Each explained factor that influences investment earns 2 marks | 12 |
| Qn 5 (c) Each challenge/problem stated in the solution and any valid point earns 1 mark., | 3 |
| **Total marks** | **20** |

**Model answers:**

**a)**

| **Year** | **2013** | **2014** | **2015** |
|---|---|---|---|
| GNP (RWFm) (current market prices) | 40,000 | 43,000 | 46,300 |
| Price Index – Inflation | 100 | 105 | 112 |
| GNP (RWFm) (constant prices) | 40,000 | **40,952** | **41,339** |

**i)** The constant price figures are arrived at by deflating the market price figures with the appropriate GNP deflator which is 100/price index. Therefore for 2021 it will be: 43,000*100/105=**40,952**. Whereas for 2022: 46,300*100/112=**41,339** respectively.

**ii)** It can be seen that the economy has expanded in real terms (constant prices) by:

- For 2020 through to 2021=(40,952-40,000)/40,000= **2.38%**
- For 2021 through to 2022= (41,339-40,952)/40,952 = **0.94%**

**b) Six main factors that can influence the volume of investment.**

- ✓ **The expected return from investments**: an investment involves the acquisition of more buildings, machinery, plant and equipment. Firms should go on adding to their capital so long as the marginal efficiency of capital exceeds the marginal cost of the extra capital (i.e., the interest rate).
- ✓ **Risk, Confidence and expectations about future prospects:** Investment projects are long-term ventures; it takes several years to reap the full return. So, there is a risk to investment because the future is uncertain.
- ✓ **New technology boosts investments because:** it can reduce the unit costs of production (by enabling the factors of production to be more productive.) This increases profitability and supply will increase as firms invest more to achieve lower costs and remain competitive.
- ✓ **The Accelerator principle/changes in income.** When income increases it tends to increase investments. This gives investors the aptitude to invest higher following an increased volume of profits/income.
- ✓ **Government Grants and Subsidies:** Governments can encourage investment by giving grants and subsidies. Government Grants are generally "regional" i.e., aimed at areas of high unemployment or "export related" to encourage firms to export or "innovative" to boost Research and Development (R & D). In terms of Agriculture, grants may be aimed at food production to make the country less reliant on imports.
- ✓ **Interest Rates:** Profits from an investment are earned over several years i.e., the life of the investment. Firms invest money now to earn profits in the future so there is an opportunity cost of having your capital tied up.

**c) Problems with National Income calculation:**

**Estimation Problems:**

- ✓ **What Goods/Services to Include General principle**: take into account only those products which change hands for money but there are distortions which reduce its accuracy e.g.: Unpaid services (e.g., housewives' duties, washing own car, etc.) are not included but the same services, when paid, for are. Many farmers consume part of their own produce with no money changing hands and many households live in their own houses, imputed value must be applied to these factors.
- ✓ **The danger of double counting**. This can lead to incorrect estimates e.g.: Incomes such as social security are received without any contribution to production, these are transfer payments from the taxpayer to the welfare recipient and are therefore not included.
- ✓ **Inadequate Information:** The sources of information used may be inconsistently measured, subject to numerous revisions, change over time, differ between countries, e.g., income tax returns are likely to be underestimates.

**QUESTION SIX**

**Marking guide**

| **Answer** | **Marks** |
|---|---|
| Qn. 6 (a) (i) the formula earns 0.5 marks. Working earns 1 mark and answer earns 0.5 marks. | 2 |
| Qn. 6 (a) (ii) The working earns 1 mark and the answer earns 2 marks. | 3 |
| Qn. 6 (a) (iii) the working earns 1 mark and the answer earns 1 mark. | 2 |
| Qn. 6 (b) Each explained point is earned 2 marks | 6 |
| Qn. 6 (c) Each stated advantage is earned 1 mark and each stated disadvantage is earned 1 mark | 7 |
| **Total marks** | **20** |

**Model answers:**

**a)**

**i) Formular:** D=RA*1/RAR; where RA is reserve ratio and RAR is the reserve asset ratio. Therefore, it will be: 1,000,000*(1/0.2) = **FRW 5,000,000**

**ii)** The initial deposit of FRW 1 million has created an expansion of bank loans of FRW 4,000,000.

**iii)**The credit multiplier will be**: (1/0.2) = 5**

**b) State three ways of levying taxation**

- ✓ Regressive Tax - Takes a higher proportion from the poorer person's salary than the rich person e.g., VAT TV License and road tax.
- ✓ Proportional Tax - Takes the same proportion of income in tax from all levels of income earners.
- ✓ Progressive Tax - Takes a higher proportion of income in tax as income rises, e.g., the entire system of income tax, those on higher income pay a higher marginal rate of tax.

**c) State the advantages of indirect taxes**

- ✓ Harder to evade than indirect taxes.
- ✓ Can be used to encourage or discourage the production or consumption of particular goods.
- ✓ It is a flexible instrument of economic policy – the rates can be changed quickly and easily and can take effect immediately.

**State the disadvantages of indirect taxes**

- ✓ These taxes are "hidden" from the tax payer.
- ✓ They can be inflationary, increase the selling price.
- ✓ They tend to be regressive.
- ✓ They are not impartial, distortions in consumption patterns, e.g., they tend to penalize smokers, drinkers and car drivers most.

## QUESTION SEVEN

**Marking guide**

| **Answer** | **Marks awarded** |
|---|---|
| Qn. 7 (a) a well stated law of comparative cost earns 2 marks | 2 |
| Qn. 7 (b) Each explained rationale earns 2 marks | 10 |
| Qn. 7 (c) An explained free-floating system earns 2 marks | 2 |
| Qn. 7 (d) Each stated argument earns 1.5 marks | 6 |
| **Total marks** | **20** |

**Model answers:**

**a) The law of comparative costs.**

The Comparative cost theory is the basis of international trade. It explains that "it pays countries to specialize in the production of those goods in which they possess greater comparative advantage or the least comparative disadvantage."

**b) Rationale of free trade to increase economic welfare.**

- ✓ Efficiency is encouraged: Trade intensifies competition which puts pressure on firms to be more efficient.
- ✓ Economies of scale/size: Industries where significant economies of scale apply might not be feasible if production had to be confined to the level of demand within national frontiers. This is especially true of small economies such as Rwanda's where those wishing to expand often have to look to export markets.
- ✓ Exports earn foreign currency: Which helps countries pay for their import bills for essential commodities like oil and raw materials. It is important that export revenues should, as far as possible, pay for imports since any Balance of Payments (BoP) current account deficit not met by capital inflows must be financed by running down foreign exchange or by foreign borrowing – neither of which courses of action is desirable over the long term.
- ✓ Exports are an injection into the economy: Greater exports means greater production and therefore increased employment potential. By causing a magnified increase in national income (via the multiplier) increased exports also boost economic growth.
- ✓ A healthy export trade creates confidence and encourages investment: The opening up of export markets gives businessmen and investors' confidence to expand their activities/increase investment since they are no longer confined to the home market.

**c) A free-floating system.**

A free-floating system is where the government allows the exchange rate to be determined by free market forces. The currency may appreciate or depreciate depending on the relative strength of supply and demand in the foreign exchange market. The level of the exchange rate has an important bearing on the ability of a country to trade. Fluctuations in the exchange rate can be damaging for the economy. Because of this, governments may intervene to influence the exchange rate through a variety of fixed exchange rate systems

**d) Arguments in favor of free-floating rates.**

- ✓ The exchange rate continuously adjusts to bring the balance of payments into equilibrium. This follows from the fact that the Central Bank simply refuses to use reserves to intervene.
- ✓ Savings on official reserves
- ✓ Greater freedom to pursue other macroeconomic objectives. For example, interest rates can be set to meet the internal needs of the economy rather than support the (perhaps overvalued) exchange rate.
- ✓ A flexible exchange rate can operate as a shock-absorber for an economy.

**END OF MARKING GUIDE AND MODEL ANSWERS.**