CPA

Certified Public Accountant Examination

Stage: Foundation F2

Subject Title: F2.2 Economics and the Business Environment

Revision Guide

iCPAR
INSTITUTE OF CERTIFIED PUBLIC ACCOUNTANTS OF RWANDA
Driving Sustainable Performance

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CONTENTS

STUDY TECHNIQUES

What is the best way to manage my time?

- Identify all available free time between now and the examinations.
- Prepare a revision timetable with a list of "*must do*" activities.
- Remember to take a break (approx 10 minutes) after periods of intense study.

What areas should I revise?

- Rank your competence from Low to Medium to High for each topic.
- Allocate the least amount of time to topics ranked as high.
- Allocate between 25% - 50% of time for medium competence.
- Allocate up to 50% of time for low competence.

How do I prevent myself veering off-track?

- Introduce variety to your revision schedule.
- Change from one subject to another during the course of the day.
- Stick to your revision timetable to avoid spending too much time on one topic.

Are study groups a good idea?

- Yes, great learning happens in groups.
- Organise a study group with 4 – 6 people.
- Invite classmates of different strengths so that you can learn from one another.
- Share your notes to identify any gaps.

EXAMINATION TECHNIQUES

INTRODUCTION

Solving and dealing with problems is an essential part of learning, thinking and intelligence. A career in accounting will require you to deal with many problems.

In order to prepare you for this important task, professional accounting bodies are placing greater emphasis on problem solving as part of their examination process.

In exams, some problems we face are relatively straightforward, and you will be able to deal with them directly and quickly. However, some issues are more complex and you will need to work around the problem before you can either solve it or deal with it in some other way.

The purpose of this article is to help students to deal with problems in an exam setting. To achieve this, the remaining parts of the article contain the following sections:

- Preliminary issues
- An approach to dealing with and solving problems
- Conclusion.

Preliminaries

The first problem that you must deal with is your reaction to exam questions.

When presented with an exam paper, most students will quickly read through the questions and then many will … **PANIC!**

Assuming that you have done a reasonable amount of work beforehand, you shouldn't be overly concerned about this reaction. It is both natural and essential. It is natural to panic in stressful situations because that is how the brain is programmed.

Archaeologists have estimated that humans have inhabited earth for over 200,000 years. For most of this time, we have been hunters, gatherers and protectors.

In order to survive on this planet we had to be good at spotting unusual items, because any strange occurrence in our immediate vicinity probably meant the presence of danger. The brain's natural reaction to sensing any extraordinary item is to prepare the body for 'fight or flight'. Unfortunately, neither reaction is appropriate in an exam setting.

The good news is that if you have spotted something unusual in the exam question, you have completed the first step in dealing with the problem: its identification. Students may wish to use various relaxation techniques in order to control the effects of the brain's extreme reaction to the unforeseen items that will occur in all examination questions.

However, you should also be reassured that once you have identified the unusual item, you can now prepare yourself for dealing with this, and other problems, contained in the exam paper.

A Suggested Approach for Solving and Dealing with Problems in Exams.

The main stages in the suggested approach are:

1. Identify the Problem
2. Define the Problem
3. Find and Implement a Solution
4. Review

1. Identify the Problem

As discussed in the previous section, there is a natural tendency to panic when faced with unusual items. We suggest the following approach for the preliminary stage of solving and dealing with problems in exams:

Scan through the exam question

You should expect to find problem areas and that your body will react to these items.

PANIC!!

Remember that this is both natural and essential.

Pause

Take deep breaths or whatever it takes to help your mind and body to calm down.

Try not to exhale too loudly – you will only distract other students!

Do something practical

Look at the question requirements.

Note the items that are essential and are worth the most marks.

Start your solution by neatly putting in the question number and labelling each part of your answer in accordance with the stated requirements.

Actively reread the question

Underline (or highlight) important items that refer to the question requirements. Tick or otherwise indicate the issues that you are familiar with. Put a circle around unusual items that will require further consideration.

2. Define the Problem

Having dealt with the preliminary issues outlined above, you have already made a good start by identifying the problem areas. Before you attempt to solve the problem, you should make sure that the problem is properly defined. This may take only a few seconds, but will be time well spent. In order to make sure that the problem is properly defined you should refer back to the question requirements. This is worth repeating: Every year, Examiner Reports note that students fail to pass exams because they do not answer the question asked. Examiners have a marking scheme and they can only award marks for solutions that deal with the issues as stipulated in the question requirements. Anything else is a waste of time. After you have re-read the question requirements ask yourself these questions in relation to the problem areas that you have identified:

Is this item essential in order to answer the question?

Remember that occasionally, examiners will put ‘red herrings’ (irrelevant issues) into the question in order to test your knowledge of a topic.

What’s it worth?

Figure out approximately how many marks the problem item is worth. This will help you to allocate the appropriate amount of time to this issue.

Can I break it down into smaller parts?

In many cases, significant problems can be broken down into its component parts. Some parts of the problem might be easy to solve.

Can I ignore this item (at least temporarily)?

Obviously, you don’t want to do this very often, but it can be a useful strategy for problems that cannot be solved immediately.

Note that if you leave something out, you should leave space in the solution to put in the answer at a later stage. There are a number of possible advantages to be gained from this approach:

1) It will allow you to make progress and complete other parts of the question that you are familiar with. This means that you will gain marks rather than fretting over something that your mind is not ready to deal with yet.

2) As you are working on the tasks that you are familiar with, your mind will relax and you may remember how to deal with the problem area.

3) When you complete parts of the answer, it may become apparent how to fill in the missing pieces of information. Many accounting questions are like jigsaw puzzles: when you put in some of the parts that fit together, it is easier to see where the missing pieces should go and what they look like.

3. Find and Implement a Solution

In many cases, after identifying and defining the problem, it will be easy to deal with the issue and to move on to the next part of the question. However, for complex problems that are worth significant marks, you will have to spend more time working on the issue in order to deal with the problem. When this happens, you should follow these steps:

Map out the problem

Depending on your preferred learning style, you can do this in a variety of ways including diagrams, tables, pictures, sentences, bullet points or any combination of methods. It is best to do this in a working on a separate page (not on the exam paper) because some of this work will earn marks. Neat and clearly referenced workings will illustrate to the examiner that you have a systematic approach to answering the question.

Summarise what you know about the problem

Make sure that this is brief and that it relates to the question requirements. Put this information into the working where you have mapped out the problem. Be succinct and relevant. The information can be based on data contained in the question and your own knowledge and experience. Don’t spend too long at this stage, but complete your workings as neatly as possible because this will maximise the marks you will be awarded.

Consider alternative solutions

Review your workings and compare this information to the question requirements. Complete as much of the solution as you can. Make sure it is in the format as stipulated in the question requirements. Consider different ways of solving the problem and try to eliminate at least one alternative.

Implement a solution

Go with your instinct and write in your solution. Leave extra space on the page for a change of mind and/or supplementary information. Make sure the solution refers to your workings that have been numbered.

4. Review

After dealing with each problem and question, you should spend a short while reviewing your solution. The temptation is to rush onto the next question, but a few moments spent in reviewing your solution can help you to gain many marks. There are three questions to ask yourself here:

Have I met the question requirements?

Yes, we have mentioned this already. Examiner Reports over the years advise that failure to follow the instructions provided in the question requirements is a significant factor in causing students to lose marks. For instance, easy marks can be gained by putting your answer in the correct format. This could be in the form of a report or memo or whatever is asked in the question. Likewise, look carefully at the time period requested. The standard accounting period is 12 months, but occasionally examiners will specify a different accounting period.

Is my solution reasonable?

Look at the figures in your solution. How do they compare relative to the size of the figures provided in the question?

For example, if Revenue were 750,000 and your Net Profit figure was more than 1 million, then clearly this is worth checking.

If there were some extraordinary events it is possible for this to be correct, but more than likely, you have misread a figure from your calculator. Likewise, the depreciation expense should be a fraction of the value of the fixed assets.

What have I learned?

Very often in exams, different parts of the solution are interlinked. An answer from one of your workings can frequently be used in another part of the solution. The method used to figure out an answer may also be applicable to other parts of your solution.

Conclusion

In order to pass your exams you will have to solve many problems. The first problem to overcome is your reaction to unusual items. You must expect problems to arise in exams and be prepared to deal with them in a systematic manner. John Foster Dulles, a former US Secretary of State noted that: *The measure of success is not whether you have a tough problem to deal with, but whether it is the same problem you had last year.* We hope that, by applying the principles outlined in this article, you will be successful in your examinations and that you can move on to solve and deal with new problems.

ASSESSMENT STRATEGY

Examination Approach

Students through both narrative and problem-based questions have the opportunity to demonstrate their understanding and application of key economic concepts, within both the domestic and global economic environments. Where appropriate, students are expected to evaluate alternative possibilities and apply their knowledge to specified or illustrative problems.

In answering all questions, students are expected to convey, unambiguously, the required information.

Examination Format

Examination Duration: 3 Hours

The examination is unseen, closed book.

Question 1 is compulsory but there is an element of choice within the question in that students are required to answer 4 of the 5 sections. This compulsory question is drawn from various parts of the syllabus in order to provide an indication of the students' overall understanding of the subject.

Students are required to answer 3 of the remaining 4 questions.

Marks Allocation

Question	**Marks**
Compulsory Question	40 (10 marks allocated to each part of the question)
Choice of 3 questions out of 4	60 (Each question allocated 20 marks each)
Total	**100**

LEARNING RESOURCES

Core Texts

Turley, Moloney and O'Toole / Principles of Economics /(Gill & Macmillan 4th ed. 2011 / ISBN: 9780717149889

David Begg and Damian Ward / Economics for Business / (McGraw-Hill 2009) / ISBN 0077124731.

McDowell, Thom, Frank & Bernanke. / Principles of Economics, (European Edition) / (McGraw-Hill 2nd Edition 2009) / ISBN: 9780077121693

Leddin & Walsh / The Macroeconomy of the Eurozone /(Gill & Macmillan 2003) / ISBN 9780717134922 (This book deals with the applied side of government thinking).

Manuals

Institute of Certified Public Accountants of Rwanda – F2.2 Economics and the Business Environment

Supplementary Texts and Journals

Lucey, T., /Costing / 7th ed. 2009 / Thomson Learning / ISBN 13-9781844809431 / ISBN 10-1844809439.

C. Drury / Management and Cost Accounting (7th edition) Cengage 2008 / ISBN 13-9781844805662 / ISBN 10-1844805662.

Horngren, Foster & Datar/ Cost Accounting – A Managerial Emphasis/ Pearson 14th ed 2011 ISBN-10- 0132109174.

Useful Websites (as at date of publication)

www.bnr.rw – National Bank of Rwanda

*Information on **bank** supervision and monetary policy (in English and French)*

www.imf.org - International Monetary Fund

www.neweconomics.org/gen/ - New Economics

www.tradingeconomics.com/rwanda/indicators

http://www.icparwanda.com/services.php

http://www.statistics.gov.rw

http://www.rra.gov.rw/rra_section86.html

http://www.worldbank.org/

F2.2 ECONOMICS AND

THE BUSINESS ENVIRONMENT

REVISION QUESTIONS

1. Write a note on *four* of the following:

(i) The Advantages and Disadvantages of a Minimum Wage.

(ii) Price Elasticity of Demand.

(iii) Fiscal Drag.

(iv) Paradox of Thrift.

(v) The Role of the Central Bank.

(4 x 10 marks each)

[Total: 40 Marks]

2. Write a note on *four* of the following:

(i) The advantages and disadvantages of indirect taxation.

(ii) Price Ceiling and Price Floor.

(iii) Law of Diminishing Returns.

(iv) The functions of money.

(v) The three main forms of Economic Systems.

(4 x 10 marks each)

[Total: 40 Marks]

3. Write a note on *four* of the following:

(i) Capital (as a factor of Production).

(ii) The Accelerator.

(iii) The role of profit in a free market economy.

(iv) The Incidence of a Tax.

(v) Balance of Payments.

(4 x 10 marks each)

[Total: 40 Marks]

4. (a) Explain with the aid of a diagram, the long run equilibrium position for a monopoly firm which seeks to maximise profits.

(10 marks)

(b) (i) State and explain three barriers to entry facing entrants to a monopoly market.

(ii) Explain how deregulation could affect:

(i) Consumers of the good/service;

(ii) Employees in the industry;

(iii) Profits of existing firms. **(10 marks)**

[Total: 20 Marks]

5. (a) Using a Circular Flow of Income diagram, explain the factors that determine the level of economic activity an economy.

(10 marks)

(b) Define economic growth and explain using examples relevant to an economy, how governments can influence and promote economic growth.

(10 marks)

[Total: 20 Marks]

6 (a) Define and distinguish between Monetary Policy and Fiscal Policy giving examples of how both may be used as policy instruments.

(6 marks)

(b) Outline the key issues associated with a high national debt making reference to the fiscal stance (policy tools) a government may adopt to reduce the national debt. Make reference to Rwanda or another economy that you are familiar with, as appropriate.

(6 marks)

(c) Explain how it is possible for the banking sector to create purchasing power and the factors that determine the amount of (or the limits to the amount of) purchasing power that they can create. Make reference to Rwanda or another economy that you are familiar with, as appropriate.

(8 marks)

[Total: 20 Marks]

7 (a) Explain, with the aid of diagrams, the difference between the Long Run and the Short Run time periods in Economics.

(4 marks)

(b) Define what is meant by Economies of Scale and list and outline any 3 factors that would contribute to positive returns to scale (Economies of Scale) for a firm.

(6 marks)

(c) Distinguish between ‘Economic Profits’ and ‘Accounting Profits’

(d) Illustrate and explain, using a diagram, the Super Normal Profit earned by a Monopolist in the long run.

(8 marks)

[Total: 20 Marks]

8. (a) Explain with the aid of appropriate diagrams, each of the following costs:

(i) Fixed Costs

(ii) Variable Costs

(iii) Average Total Costs

(iv) Marginal Costs

(4 marks)

(b) A firm's average fixed costs of producing 6 units were €100 per unit.

Units of Output	**Average variable Costs**
1	20
2	18
3	16
4	15
5	14
6	12
7	16
8	20

You are required to calculate the following:

(i) Fixed Costs

(ii) Average Total Cost of 4 units

(iii) Marginal Cost of the 7th unit

(iv) Total Cost of 5 units **(8 marks)**

(c) Distinguish between the Long Run and Short Run time periods for a firm operating in a perfectly competitive market.

(8 marks)

[Total: 20 Marks]

9. (a) List and explain the determinants of Demand, distinguishing between the movement along a demand curve and a shift in a demand curve. Use diagrams as appropriate.

(10 marks)

(b) Explain what is meant by market equilibrium and analyse the effects on the equilibrium price and quantity of:

(i) The introduction of a new cost-saving technology.

(ii) An increase in the price of a complimentary good. **(10 marks)**

[Total: 20 Marks]

10. (a) Define unemployment and explain how it is measured. (4 marks)

(b) Identify the types of and causes of unemployment. (6 marks)

(c) Outline the costs of and policies associated with reducing unemployment

(10 marks)

[Total: 20 Marks]

F2.2 ECONOMICS AND

THE BUSINESS ENVIRONMENT

SUGGESTED SOLUTIONS

SOLUTION 1

(i) The Advantages and Disadvantages of a Minimum Wage.

The minimum wage is the minimum rate a worker can legally be paid (usually per hour) as opposed to wages that are determined by the forces of supply and demand in a free market. Each country sets its own minimum wage laws and regulations, and many countries have no minimum wage.

Advantages and Disadvantages:

Minimum wages may have the effect of:

- Reducing low-paid work which may be unfair and exploitative.
- Reducing the dependency of the low-paid on welfare-state benefits which may in turn reduce taxes or allow increases of other government outlays.
- Stimulating economic growth by discouraging labour-intensive industries, thereby encouraging more investment in capital and training.
- Encouraging many of those who would normally take low-wage jobs to stay in (or return to) school and thus to accumulate human capital.

On the other hand, minimum wages may have the effect of:

- Limiting employment of low-wage earners, and generally increasing unemployment.
- Raising employment barriers for people with little or no work experience or formal education: if a worker's labour is not worth the minimum, he may not find employment at all.
- Curbing economic growth by increasing the cost of labour.
- Increasing the price of goods and services, since employers pass on employment costs in the form of higher prices. (Opponents of minimum wage often see a negative income tax e.g., as a way to support the lower waged jobs, with the money coming from those who pay taxes, not those who pay for the products including the unemployed).
- Decreasing incentive for some low-skilled workers to gain skills. The effects of minimum wage laws, both positive and negative, may be increased by 'knock-on effects', with increased wages for workers already earning above the minimum wage.

(10 marks)

(ii) Elasticity of Demand.

- Price elasticity of demand refers to the sensitivity of demand for a good in response to a change in its own price. The factors which affect price elasticity include the following:
- The availability of close substitutes at competitive prices is the greatest single influence on price elasticity of demand. Goods are purchased because they provide utility, if there are other goods available at comparable prices which provide more or less the same utility consumers will switch to buying these substitute goods if the price of the good in question is increased more than the price of substitute goods. Similarly if the price of a good is reduced relative to the price of substitute goods the consuming public will switch to buying the good which has become relatively cheaper. The closer the degree of substitutability the more will consumers tend to switch their purchasing behaviour in response to a change in relative prices and consequently the greater will be price elasticity.
- If the good in question is one of two goods which are in joint demand then this complementarity affects price elasticity of demand for the good. Reductions in the price of complementary goods will increase the demand for the good in question e.g. a reduction in the price of motorcars will increase the demand for petrol. If the good in question is the cheaper of two goods which are in joint demand, then the demand for it is likely to be relatively inelastic in response to changes in its own price.
- The proportion of income which is spent on the commodity also affects it elasticity. In general the greater the proportion of a person's income which is spent on a good the greater will be that person's price elasticity of demand for the good. The reason for this is that the greater the proportion of your income which you spend on the goods the more significant to you is a change in its price.
- The more durable the commodity the more elastic is the demand for it likely to be in response to changes in its own price. This is because it is easier to postpone the purchase of such goods by extending the life of the existing model. Examples of such goods are refrigerators, bicycles, lawnmowers. The expectations of consumers as to future price changes will affect elasticity. No matter what is happening in respect of current prices if consumers expect prices to be lower in the future they will refrain from buying in the present conversely they will bring forward their purchasing if they expect prices to be even higher in the future.

(10 marks)

(iii) Fiscal Drag.

Fiscal drag is an economics term referring to a situation where a government's net fiscal position (equal to its spending less any taxation) does not meet the net savings goals of the private economy. This can result in deflationary pressure attributed to either lack of state spending or to excess taxation.

One cause of fiscal drag is the consequence of expanding economies with progressive taxation. In general, individuals are forced into higher tax brackets as their income rises. A greater tax burden can lead to less consumer spending. For the individuals pushed into a higher tax bracket, the proportion of income as tax has increased, resulting in fiscal drag.

Fiscal drag is the tendency of revenue from taxation to rise as a share of GDP in a growing economy. Tax allowances, progressive tax rates and the threshold above which a particular rate of tax applies usually remain constant or are changed only gradually. By contrast, when the economy grows, income, spending and corporate profits rise. So the tax-take increases too, without any need for government action. This helps to moderate the rate of increase in demand, reducing the pace of growth, making it less likely to result in higher inflation. Thus fiscal drag is an automatic stabiliser, as it acts naturally to keep demand stable.

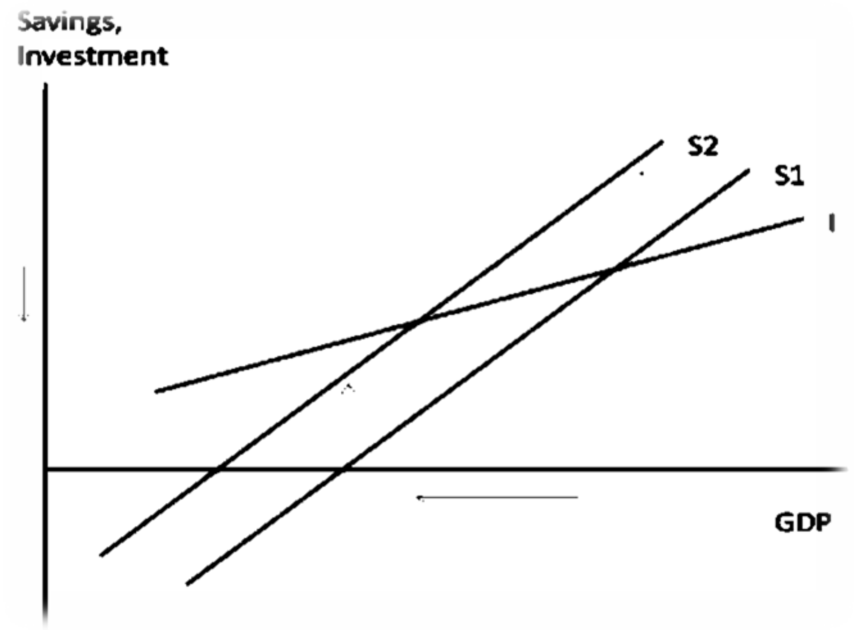
(10 marks)

(iv) Paradox of Thrift.

The paradox of thrift relates to the possibility of households intending to save more (or less) but actually ending up saving less (or more). Suppose people decide to become more thrifty; that is, they decide to save more at each level of income. One might expect that this would increase the total amount of savings, but the simple Keynesian multiplier model predicts a paradox of thrift, that total savings will remain the same and income will decline. It is an economic concept that holds that if everyone tries to save an increasingly larger portion of his or her income, they will become poorer instead of richer. This is because the economy will slow down from reduction in demand and the very same people would lose their jobs. This theory, however, applies mainly to Keynesian economics where increased savings represent a diminishing circular flow of income.

In the figure below it is assumed that the level of investment is positively related to the level of income (as indicated by the upward slope). The initial equilibrium is at point ‘a’ with income level ‘y0’ and ‘s0’ being saved. Let’s assume that Households decide to save more (for whatever reason) and therefore spend less of their incomes. This is indicated in an upward shift in the savings function from s1 to s2. Because of the increase in savings represents a fall in aggregate demand, the equilibrium level of income falls from y0 to y1 (point c represents the new equilibrium). Although the savings ratio has increased, the overall level of savings has fallen due to the fall in the level of income.

Households had intended saving an amount s1 from y0 but ended up saving an amount s2 from y1 i.e. the level of savings has fallen despite the original intention to increase spending.



(10 marks)

(v) Role of the Central Bank.

Central Banks generally have a degree of autonomy, but ultimately they are answerable to and act on behalf of the government.

Typically, the following functions are performed by the Central Bank.

- Sole Issues of legal tender
- Banker to the clearing banks – the clearing banks keep their operation l deposits at the Bank.
- Banker to the Government.
- Supervision of the financial system.
- Lender of last resort.
- Borrows money on behalf of the government.
- Instrument of government monetary policy. **(10 marks)**

[Total: 40 Marks = 10 marks per question]

SOLUTION 2

(i) The advantages and disadvantages of indirect taxation.

Advantages:

1. Indirect Taxes are productive of revenue
2. Indirect Taxes are equitable
3. Payment is convenient for the Taxpayer
4. Indirect Taxes do not constitute a disincentive to work
5. Indirect taxes may have a stabilizing effect on the level of income
6. Indirect Taxes are variable and specific (5 marks)

Disadvantages

1. Indirect taxes may be regressive
2. Indirect tax may be inflationary
3. Indirect tax may lead to misallocation of resources
4. Indirect tax may affect employment and the viability of industries
5. Indirect tax discriminates between individuals of the same economic standing.

(5 marks)

(Sub total: 10 marks)

(ii) Price Ceiling and Price Floor

Price Ceiling

A price ceiling is where the price is not allowed to rise to its equilibrium level. If the pricing authority considers that the equilibrium price of a good or service is too high, it can set a maximum ceiling price. This is usually done with the aim of benefitting the consumer.

(2 marks)

Diagram – explained (3 marks)

Price Floor

A price floor is the situation where the price is not allowed to decrease below a certain level. It only keeps the price from falling, not from rising. If the pricing authority considers that the equilibrium price of a good or service to be too low, it can set a minimum or price floor. This can be done to protect the incomes of producers.

(**2 marks**)

Diagram – explained (3 marks)

(Sub total: 10 marks)

(iii) Law of Diminishing Returns

The Law of Diminishing Marginal Returns states that as increasing quantities of a variable factor of production are combined with a fixed factor of production, a stage will eventually be reached when marginal returns will begin to decline. The short run is defined as a period during which at least one factor of production is fixed in supply and since this law is based on the notion of a fixed factor of production it is a short run phenomenon.

Note that the law does not state that total returns will begin to decline, it refers only to the diminution of marginal returns. The common sense of the law may be realised by considering that if it did not apply the whole population could be fed by devoting enough workers to the cultivation of a specific area of land.

(10 marks)

(iv) The functions of money

The roles which money plays in an economy are:

- A medium of exchange. This is the most important function of money. Suppliers of factors of production receive money and then use this money to purchase the goods and services which they require. It obviates the need for a barter system.
- A store of value. This aspect of the role of money is facilitated because of the particular characteristics of money so that a time gap may exist between the receipt of money and its use. It is this quality of money which enables people to save for their old age or for future purchases. However, inflation particularly lessens the usefulness of money for this purpose.
- A measure of value/unit of account. Money is the common denominator by which we measure and express value.

- A standard of deferred payment. This means that it is possible to express, in money terms, the price which must be paid at some future date. This feature of money makes possible credit trading and the drawing up of financial contracts.

(10 marks)

(v) The three main forms of economic systems.

An "economic system" is the set of institutions within which a community decides what, how and for whom to produce goods and services. At one extreme there is the centrally planned or command economy and at the other the free market economy. In between is the mixed economy that is some combination of the two extremes.

Centrally Planned or Command Economy: Where all decisions pertaining to economics are taken by a central authority. It is characterised by collective ownership of resources therefore the price mechanism does not operate e.g. Cuba or North Korea.

A Market Economy is a free enterprise, laissez-faire or capitalist economic system. Land and capital are privately owned. An economy that decides what, how and for whom goods and services are produced by channelling individual choice through a market is called a market economy. Markets consist of large numbers of buyers and sellers and price is determined by supply and demand. Adam Smith and the classical economists held that the "invisible hand" leads to desirable market outcomes.

Mixed Economy: A Mixed economy contains a mixture of private enterprise and state involvement in production and distribution. The reasons for government involvement are:

• To provide goods and services that private industry will not or cannot supply.

• To correct inequalities in the distribution of wealth between individuals.

• To curb monopoly power.

• To overcome frictions e.g. in the movement of labour; and

• To relieve shortages e.g. housing.

(3 x 3 marks + 1 for economic system)

(Sub total: 10 Marks)

[Total 40 marks]

SOLUTION 3

i) Capital as a factor of production is defined as man-made wealth which is used in the production of goods and services. Money, in itself, is not capital. It merely permits the purchase of capital goods (money may also be used for the purchase of consumption goods). An increase of money in an economy will not increase the capital of an economy; in the absence of an increase in the supply of goods and services, prices will merely rise. Money is a store of wealth and can be exchanged for capital goods and only to this extent can money be considered as capital in the factor of production sense. Capital goods (known also as producer goods) are goods, e.g. factories, industrial plant and machinery, which are used for the production of other goods. Capital goods are sometimes referred to as intermediate goods in recognition the fact that the end product of the industrial process is consumer goods and capital goods are merely a means towards this end. The demand for capital arises because of the contribution which capital makes to production. Productivity can be increased through the use of capital goods. Machinery can work faster and more accurately than labour and using a machine can release labour for other jobs. But in countries where the cost of labour is low, it may be more economic to use labour to produce the good than to use labour to make a machine to make the good. But sometimes, a good can only be made by a machine, so capital goods will always be present to some extent.

ii) The Accelerator (or Acceleration Principle) is based on the observation that an increase in the demand for final goods results in a more than proportionate increase in the demand for capital goods. In the following example it is necessary for the firm to replace one machine a year as machines sequentially come to the end of their working lives. In this scenario when the firm experiences a 10% increase in the demand for tables during year 3 there is a resultant 100% increase in the demand for table-making machinery (i.e. from 1 to 2) in that year

Year	Total demand for tables	Total no. of machines required	Gross investment	Net investment
1	1,000	10	1	0
2	1,000	10	1	0
3	1,100	11	2	1
4	1,100	11	1	0

While this principle is usually explained in terms of an increase in demand as explained in the above table, it can also work in a downward direction when falling demand for consumer goods leads to a greater percentage reduction in demand in capital goods industries. For this reason changes in the level of demand in capital goods industries can be more volatile than demand swings in industries supplying consumer goods.

(iii) The earning of profit is a necessary element in the operation of a free enterprise economy. It enhances the efficiency of a free market system in the following ways:

- Normal profit is a cost of production; it is the cost of the entrepreneurship factor of production. It is the minimum amount that the entrepreneur must earn if he/she is to remain in that particular line of business in the long run.
- Supernormal profit is a reward to the entrepreneur for successful innovation, for introducing new commodities for which the public is prepared to pay an economic price.
- Supernormal profit acts as a signalling system from the market to producers indicating those goods the supply of which might profitably be increased.
- The existence of supernormal profits stimulates the desire for entry into an industry.
- Profits provide the funds that enable a firm to expand and increase its level of production.
- Where price competition exists, the actions of competitors constrain the ability of rival firms to increase their selling prices. In these circumstances the firms earning the most profits will be the firms with lowest cost. In this way production is concentrated in the hands of the most efficient firms.

(iv) The incidence of a tax refers to the manner in which the burden of the tax is borne. A distinction can be drawn between the impact or formal incidence of the tax which means the person or commodity on which the tax was imposed, and the effective incidence of the tax, which means who actually pays the tax e.g. a tax on farmers may result in an increase in food prices by the amount of the taxes, in which case, though the formal incidence of the tax would have been on farmers, the effective incidence of the tax is on consumers.. With respect to direct taxes it is rather difficult to shift the incidence of such taxes. E.g. if I am paid Rwf10,000 per week and I had been paying Rwf500 per week income tax; if my income tax liability is increased to Rwf600 per week, it is extremely unlikely that I will be able to negotiate a wage increase of Rwf100 (assuming this increase was not itself taxed) in order that I may maintain parity in my after-tax pay. In contrast to this situation it may be possible to shift all or some of, of the incidence of an expenditure or excise tax, 'forward' on to customers or 'backwards' on to suppliers depending on the relative elasticity of supply and demand for the product on which the tax is levied. Whichever of supply or demand is the more inelastic will tend to end up bearing the greater proportion of the tax and if for example demand was perfectly inelastic then it would be possible to increase the price of the good by the full amount of the tax without there being any resultant fall-off in demand.

(v) A country's Balance of Payments, which is a record of that country's economic transactions with the rest of the world, is divided into two principal sections; namely. the current account and the capital account.

The current account relates to transactions relating to the purchase or sale of good and services. The current account section is essentially a record of income, as distinct from capital transactions. The section of the current account which records the import and export of merchandise (goods) is known as the Balance of Trade. The term invisible exports is often applied to the export of services since nothing of a tangible nature leaves the country in return for the money which is received; e.g. foreign tourists spending their holidays in Rwanda; similarly the term invisible imports is applied to the purchase by local residents or businesses of foreign services. It is extremely unlikely that the value of goods and services imported would be exactly equal to the value of goods and services exported so that there will be a surplus if the value of goods and services imported is less than the value of goods and services exported and a deficit if the opposite applies. The Balance of Payments is completed when the capital account section is associated with the current account section.

The capital account section is an account of a country's inflow and outflow of capital and transactions of this nature cause a consequent net increase or decrease in the external reserves of the country. Since the Balance of Payments is a financial statement, it is a book-keeping exercise and consequently the totals of the current and capital accounts must balance in the sense that total credits must equal total debits. References to surplus or deficits refer to the current account section of the Balance of Payments or to a change in the level of foreign reserves that are held by the National Bank

SOLUTION 4

(a) Explain with the aid of a diagram, the long run equilibrium position for a monopoly firm which seeks to maximise profits.

(10 marks)

(b) (i) State and explain three barriers to entry facing entrants to a monopoly market.

(ii) Explain how deregulation could affect:

(i) Consumers of the good/service;

(ii) Employees in the industry;

(iii) Profits of existing firms. **(10 marks)**

[Total: 20 Marks]

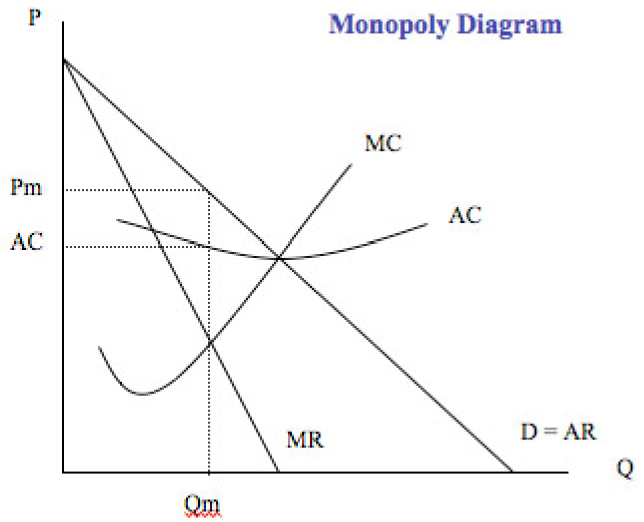
(a) A Monopoly is a market structure in which there is either only one producer or seller in the market. The one firm produces the goods for a particular sector/industry. Entry is typically restricted due to high costs or other barriers, which may be economic, social or political. Since the firm is the sole supplier there is no distinction between the firm and the industry, so the firm's demand curve is also the industry's demand curve.

Assumptions of a monopoly are:

1. There is only one firm
2. The single product produced has no close substitute.
3. Information is not freely available to firms interested in entering the industry.
4. There are barriers to entry of new firms.
5. Monopolists are price makers - a negatively shaped demand curve.
6. Inefficient producer – waste of scare resources.
7. Makes Super Normal Profits.

Monopoly Diagram

Diagram of LR equilibrium of Monopoly.



1. Equilibrium
   - Occurs at point Qm where
   - MC = MR and MC is rising and cuts MR from below.
2. Price charge & /Output produced
   - The firm produces output Qm and sells it at price Pm on the market
3. Cost of production
   - The cost of producing this output shown at point AC.
4. Super Normal Profits.
   - This firm is earning SNP's – represented by the shaded area above.
   - They are earning SNP's because AR > AC and
   - They can continue to earn SNP's because barriers to entry exist..
5. Waste of Scarce Resources
   - Because the firm is not producing at the lowest point of the AC curve it is wasting scarce resources.

Marks allocation: (3 for explaining Monopoly, 2 for correctly labelled diagram, 5 for explanation of the diagram)

(b)

(i) Three barriers to entry to a monopoly market:

1. Legal / Statutory Monopoly

   Other firms may not be allowed into the industry because the government confers on a firm the sole right to supply a particular good or service..

2. Ownership of a patent / copyright

   If a firm has the sole right to a manufacturing process then no other firm can compete with it - other firms are not allowed to use this patent until the time period for it has expired.

3. Ownership of raw materials

   A firm may have complete control over the source of essential raw materials i.e. an oil drilling or mining company.

4. Large capital investment

   - In some industries the minimum size of a firm required to operate efficiently is so large that there is no room for competitors once one firm has established itself.
   - Competitors are discouraged from entering because of the high initial start-up costs.

5. Trade agreements /collusion/cartels

   By entering trade agreements with other firms, a firm can share out the market so that no competition exists within its segment of the market.

6. Mergers / takeovers

   A firm may ensure its survival by merging / taking over other rival firms in the same line of business, such that it becomes a monopoly and no competition exists within the industry.

7. Monopolies based on fear, force or threats

   An individual / firm may stop other individuals/firms providing similar goods/services by means of threats/force /instilling fear into potential entrants i.e. the supply of illegal drugs.

8. Brand proliferation

   A firm may gain monopoly power if, through its advertising, consumers are convinced that there is no suitable alternative to its particular brands.

(ii) Deregulation

a) Consumers of the good/service

- Lower Prices.
- Increased availability of service.
- Increased efficiency.
- Loss of essential non-profit making services.
- Loss of quality in service
- Higher prices in future
- Increased competition / an increase in supply may cause prices to fall.
- With an increase in the number of suppliers, availability of the good/service may expand e.g. taxis in Kigali.
- With increased choice in suppliers the consumer may benefit from increased efficiency by firms.
- Non-profit making services may be discontinued by companies in an effort to reduce costs
- Quality of services may worsen to cut costs
    - There may be higher prices in the future in order to survive the competition

(b) Employees in the industry

- Loss of employment in existing businesses.
- New job opportunities with new suppliers.
- Changed working conditions.
- With increased competition existing suppliers may suffer from a loss of business resulting in a loss of jobs.
- New suppliers may offer increased employment opportunities.
- The drive towards increased profits may mean that businesses may reduce the benefits to existing / new employees.

(c) Profits of existing firms

- No changes in efficiency or drive may lead to decreased profits
- Competition can lead to innovation and increased drive and hence to increased profits
- If existing businesses experience a loss of business, their market share falls resulting in a loss of profits.
- If the existing businesses are able to meet the new competition and expand their business activities the opposite of the above may occur. Business may experience economies of scale.

M**arks allocated (3x1for barriers explained, 3x2 for each statement, 1 overall applied example/discussion)**

SOLUTION 5

(a) Using a Circular Flow of Income diagram explain the factors that determine the level of economic activity in a country's economy.

The circular flow of income diagram illustrates how income flows through an economy. Firms in order to produce goods and services require command over factors of production; entrepreneurs achieve this command by purchasing or hiring the required factors of production. Households supply the labour which is a factor of production

Households are the consumers of the goods and services and they acquire the money which enables them to purchase the goods and services through selling their labour and any other factors of production which they own. If households spent all their income in buying the output of domestic firms and if all the revenue of firms accrued to domestic households - in the form of wages, rent, profit and interest - then there would be a continuous non-varying circular flow of income between domestic households and domestic firms.

However, economic life is not as simple as that. Households have many options on how to allocate their incomes, their income can be spent on domestically produced goods or on foreign produced goods;

Alternatively, not all the income earned is spent. Some of the income can be saved or it may be required in order to pay taxes. Any income which is not channelled back to domestic firms is in effect a withdrawal from the circular flow of income and of itself results in a diminution in the level of activity in the domestic economy.

Withdrawals consist of

(i) savings,

(ii) money spent on buying imported goods and services and

(iii) payments of tax.

Similarly the income of firms is not derived solely from the spending of domestic households.

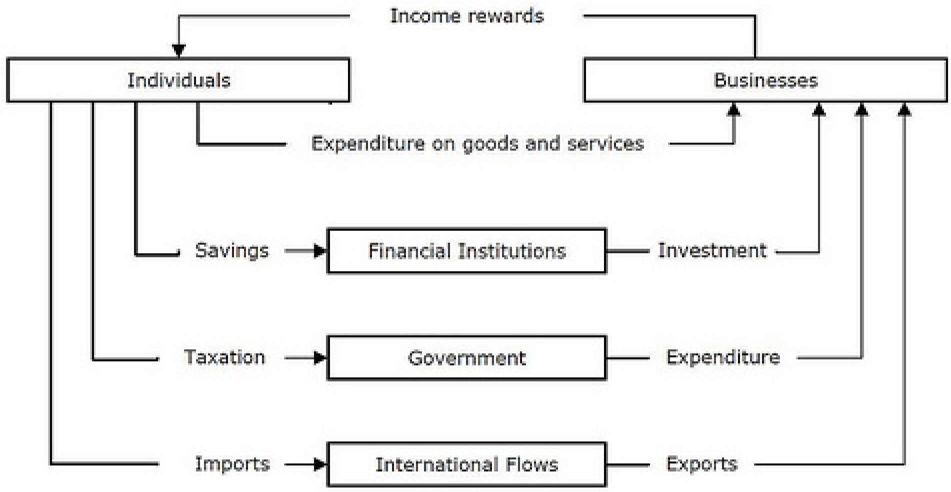
Domestically produced goods and services are also purchased by

(i) the government,

(ii) by foreign purchasers of the goods which we export and

(iii) by firms who use some of their income to purchase capital goods in the domestic economy as a form of investment. Because government spending, exports and investments increase the level of activity in the domestic economy they are referred to as injections into the circular flow of income.

The withdrawals and injections in the circular flow of income may be related to each other. If people save then banks and other financial institutions will have funds to lend, similarly if tax revenues increase it will be possible (easier) for the government to increase (or maintain) its spending and if our currency is used to buy the produce of foreign firms (our imports) this will provide them with the currency they require in order to buy our exports. The circular flow of income diagram shown below illustrates this analysis. If injections exceed withdrawals the level of expenditure in the domestic economy will rise and consequently there will be growth in the economy. Conversely, if withdrawals exceed injections the level of expenditure in the domestic economy will rise and consequently there will be a decline in growth in the economy.



Circular of Income with Foreign Trade and Government Sector

Marks allocation: (3 for Diagram, 5 for explanation, 2 for reference to the Rwandan Economy).

(10 marks)

b) Define economic growth, and explain using examples relevant to the Rwandan economy, how the government can influence and promote economic growth.

Economic Growth can be defined as the steady increase in Gross Domestic Product (GDP) of a country as a result of an increase in the economy's productive capacity and activity. It is concerned with improving living standards and this is a result of growth in physical output of physical goods and services.

In general there is agreement that the government can influence economic growth but there is disagreement as to what policies should be adopted. Typical measures the government can use to influence economic growth are:

- Labour: Through education and training and the identification of new work practices.
- Public Sector Investment: An example of this might be that despite or because of a recession, the government continues with capital investment programmes - in particular, infrastructure investment such as roads and national hospitals.
- Maintenance of Law and Order.
- Tax System - In particular tax on profits: Differential rates of Corporation Tax on returned profits and dividends can be used in an effort to encourage increased retention of profits and, through this, increased investment.
- Aggregate Demand: A high level and consistent level of aggregate demand (AD) can be achieved by way of fiscal and monetary policy.
- Competitiveness: Achieved, by and large, through cost levels, innovation, enterprise and production techniques and methods.
- People's attitudes: People need to have confidence in the economy and have attitudes that are favourable to growth.
- Interest Rates. If the cost of borrowing is high, investment will be low.
- Research and Development.
- Level of State Intervention.

Students may come up with more specific measures and examples within the Rwandan Economy.

Marks allocation:(2 for Economic Growth, 1 mark for each relevant factor x 5, 3 for discussion in relation to the Rwandan economy)

(10 marks)

[Total: 20 Marks]

SOLUTION 6

(a) Define and distinguish between Monetary policy and Fiscal Policy, giving examples of how both may be used as policy instruments.

Monetary policy is the process a government, central bank, or monetary authority of a country uses to control

(i) the supply of money,

(ii) availability of money, and

(iii) cost of money or rate of interest to attain a set of objectives oriented towards the growth and stability of the economy.

Fiscal policy involves the Government changing the levels of Taxation and Government spending in order to influence Aggregate Demand (AD) and therefore the level of economic activity.

(AD is the total level of planned expenditure in an economy (AD = C + I + G + X – M)

Fiscal policy and Monetary Policy aims to stabilise economic growth, avoiding the boom and bust economic cycle.

Monetary policy is usually carried out by the Central Bank / Monetary authorities and involves:

- Setting base interest rates (e.g. Bank of England in UK and ECB in Europe)
- Influencing the supply of money. E.g. Policy of quantitative easing to increase the supply of money.

Fiscal Policy is carried out by the government and involves changing:

- Level of government spending
- Taxation and hence this influences the level of government borrowing.
- In recent decades, monetary policy has become more popular because
- Because where the Central Bank is independent of government, it can reduce political influence (e.g. desire to have a booming economy before a general election)
- Fiscal Policy can have more effect on the supply side of the wider economy. E.g. to reduce inflation, higher tax and lower public spending would not be popular and the government may be reluctant to pursue this. Also lower government spending could lead to reduced public services and the higher income tax could encourage a disincentive to work.

- Monetarists argue that expansionary fiscal policy (larger budget deficit) is likely to cause crowding out – higher government spending reduces private sector spending and higher government borrowing pushes up interest rates. (However, this analysis is disputed)
- Targeting inflation is too narrow. In some countries (viz. USA and Europe), the Central Banks ignored the booms in housing markets and bank lending which were unsustainable. This inevitably led to the current economic depression world-wide.
- Liquidity Trap. In a recession, cutting interest rates may prove insufficient to boost demand because banks don't want to lend, or have no money to lend, and consumers are too nervous to spend.
- Quantitative easing – creating money - may be ineffective if banks just want to keep the extra money in their balance sheets.
- Government spending directly creates demand in the economy and can provide a kick-start to get the economy out of recession. Thus in a deep recession, relying on monetary policy alone, may be insufficient to restore equilibrium in the economy.

Marks allocated (2 x 3 = 6 marks)

(b) Outline the key issues associated with a high national debt making reference to the fiscal stance (policy tools) a government may adopt to reduce the national debt. Make reference to Rwanda or another economy with which you are familiar, as appropriate.

The cumulative total of outstanding government borrowing is known as National Debt. Although the casual relationships are not now very well understood, countries with national debt levels above 90% of GDP, as opposed to those with a much lower debt are much more associated with

1. More frequent and severe financial crises,
2. Significantly slower economic growth, and
3. Higher rates of inflation.

Mention should also be made of the cost of servicing a high national or government debt. High debt, high interest charges and thus it prevents other uses of that money by government and can lead to higher taxes and significantly reduced current spending.

Fiscal Stance:

This refers to whether the government is increasing Aggregate Demand (AD) or decreasing AD In other words – the government has an Expansionary (or loose) Fiscal Policy.

• This involves increasing AD, therefore the government will increase spending (G) and cut taxes. Lower taxes will increase consumers spending because they have more disposable income(C). This could worsen the government budget deficit

Deflationary (or tight) Fiscal Policy

• This involves decreasing AD, therefore the government will cut government spending (G) and/or increase taxes. Higher taxes will reduce consumer spending (C). This will lead to an improvement in the government budget deficit

Fine Tuning: This involves maintaining a steady rate of economic growth through using fiscal policy. However this has proved quite difficult to achieve.

Automatic Fiscal Stabilisers

If the economy is growing, people will automatically pay more taxes (VAT and Income tax) and the Government will spend less on unemployment benefits. The increased T (tax) and lower G will act as a check on AD.

In a recession the opposite will occur with tax revenue falling but increased government spending on benefits, this will help stabilise AD

Discretionary Fiscal Stabilisers

This is a deliberate attempt by the government to affect AD and stabilise the economy, e.g. during a boom the government will increase taxes to reduce inflation

Injections (J):

This is an increase of expenditure into the circular flow, it includes govt spending(G), Exports (X) and Investment (I)

Withdrawals (W):

This is leakage from the circular flow this is household income that is not spent in the circular flow. It includes:

Net savings (S) + Net Taxes (T) + Net Imports (M)

Note Fiscal Policy was particularly used in the 1950s and 1960s to stabilise economic cycles in Europe. These policies were broadly referred to as 'Keynesian'.

In the 1970s and 1980s governments tended to prefer monetary policy for influencing the economy.

There are many factors which make successful implementation of fiscal Policy difficult.

Marks allocated (3 + 3 = 6 marks)

(c) Explain how it is possible for the banking sector to create purchasing power and the factors that determine the amount of (or the limits to) the amount of purchasing power that they can create. Make reference to Rwanda or another economy with which you are familiar.

When a bank accepts a deposit and subsequently grants a loan it is not merely transferring purchasing power from lenders to borrowers but rather, because of the fractional reserve system, it can lend out a multiple of the original deposit and in this way actually create purchasing power. When a bank receives a deposit for Rwf1,000,000 it does not need to keep this deposit entirely in the form of cash. From experience the bank knows that only a percentage of the deposit will be required as cash. For example let us assume that a bank considers 10% of deposits to be a prudent liquidity ratio.

A prudent liquidity ratio is the ratio which the bank retains for sufficient liquid assets to enable it to satisfy the demands made on it for cash.

Although more than 10% of balances are operational only approx.10% involve cash transactions because most transactions are conducted without recourse to cash e.g. through the use of cheques. Thus in our present example of the Rwf1,000,000 in cash deposited with the bank it need hold onlyRwf100,000 to provide it with adequate liquidity and consequently Rwf900,000 can be lent out. This Rwf900,000 which has been lent out will in the course of fulfilling its money function(s) return to the banking system, the person to whom this loan is granted buys from the local office supplier a photocopying machine for Rwf900,000.The office supplier lodges the Rwf900,000 in their bank account in bank B and this bank which also operates a liquidity ratio of 10% seeks to lend outRwf810,000 from the lodgement ofRwf900,000 and so this process continues until the repercussions of the original lodgements peter out. The final effect of the initial lodgement of Rwf1,000,000 would be the creation of Rwf10,000,000 of additional purchasing power. This is an example of the money multiplier in operation. In this example, with a liquidity ratio of 10%, the money multiplier is 10.

In general terms the money multiplier is the inverse of the liquidity ratio. In practice the creation of purchasing power is not as mechanical as the foregoing might suggest, the following factors are also relevant:

- Banks ability to grant loans is related to the magnitude of their deposit base, so it is directly related to their ability to generate deposits.
- All of the money may not find its way back into the financial system.
- Attention must also be focussed on the demand for loans. While banks may have the ability to grant loans, the general public may not wish to borrow all funds which are

available. Similarly banks will only be prepared to loan to those who they consider to be a good risk.

- Banks do not have one liquidity ratio, they know from experience that at particular times of the year e.g. Christmas, there will be an increase in the demand for cash so at such a time they need to hold a higher ratio of assets in cash form.
- Banks must comply with the regulations of the Financial Regulator and the laws of the land.

However, many text books concentrate on

(i) the deposit base,

(ii) the liquidity ratio and

(iii) the demand for loans

As being the salient features in respect of the amount of purchasing power that banks can create.

Marks allocated (6 + 2 = 8 marks)

[Total: 20 Marks]

SOLUTION 7

(a) Explain with the aid of diagrams the difference between the Long Run and the Short Run time periods in Economics.

Long Run is defined as that period where all factors of production can change. Short run is defined as that period of time where only variable factors can change.

Firms must cover average variable costs in the short run and they must cover average costs in the long run.

[The student is encouraged to draw a Diagram illustrating the supply decision in the short run and long run.]

Marks allocated (4 marks)

(b) Define what is meant by Economies of Scale and list and outline any 3 factors that would contribute to positive returns to scale (economies of scale) for a firm.

Firms can experience both internal and external economies of scale.

[The student should draw a Diagram illustrating economies of scale and u-shaped curve.]

Internal Economies of Scale are economies or benefits which accrue from the increase in the scale of output of an individual firm and they provide benefits to that firm alone. They are usually classified as:

(1) Technical Economies of Scale.

(2) Marketing Economies of Scale.

(3) Financial Economies of Scale.

External Economies of Scale are benefits which accrue from the growth of an industry and thus may be availed of by all firms in the industry.

Examples are:

1. Specialised firms establishing to support the industry.
2. Cost of research being shared among firms.
3. Higher Education Institutions delivering programmes targeted to assist employees.
4. The establishment of marketing boards and other specialized agencies to assist the industry.

Marks allocated (3 + 3 = 6 marks)

(c) Distinguish between ‘economic profits’ and ‘accounting profits’?

Accounting Profits are based on historical information and indicate the difference between revenue (received and due) on the one hand and expenditure paid and owed on the other.

An economist sees cost, an element of profit in terms of opportunity cost. I.e. the cost in terms of alternatives foregone. Therefore accounting profits are generally greater than economic profits.

Marks allocated (2 marks)

(d) Illustrate and explain, using a diagram, the super normal profit earned by a Monopoly in the long run.

A Monopoly is a market structure in which there is either only one producer or seller in the market. The one firm produces the goods for a particular sector/industry. Entry is typically restricted due to high costs or other barriers, which may be economic, social, or political. Since the firm is the sole supplier there is no distinction between the firm and the industry, so the firm’s demand curve is also the industry’s demand curve.

Assumptions of a monopoly are:

1. There is only one firm
2. A single product is produced and there is no close substitute.
3. Information is not freely available to firms interested in entering the industry.
4. There are barriers to entry of new firms.
5. Monopolists are price makers, a negatively shaped demand curve.
6. Inefficient producer – waste of scare resources.
7. Make Super Normal Profits.

Monopoly Diagram

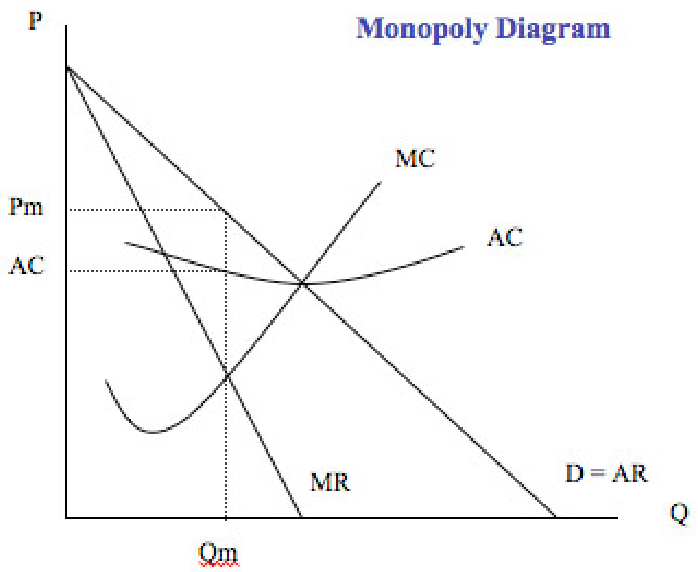


Diagram of LR equilibrium of Monopoly.

1. Equilibrium
   - Occurs at point Qm where
   - MC = MR and MC is rising and cuts MR from below.
2. Price charge & /Output produced
   - The firm produces output Qm and sells it at price Pm on the market
3. Cost of production
   - The cost of producing this output shown at point AC.

4. Super Normal Profits.
   - This firm is earning SNP's – represented by the shaded area above.
   - They are earning SNP's because AR > AC and
   - They can continue to earn SNP's because barriers to entry exist..

5. Waste of Scarce Resources
   - Because the firm is not producing at the lowest point of the AC curve it is wasting scarce resources.

Marks allocation: (3 for explaining Monopoly, 2 for correctly labelled diagram, 3 for explanation of the diagram)

(8 marks)

[Total: 20 Marks]

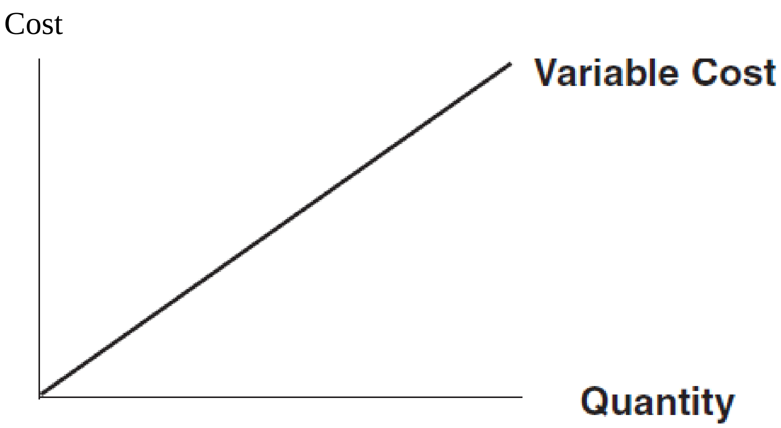
SOLUTION 8

(a) Explain with the aid of appropriate diagrams, each of the following costs.

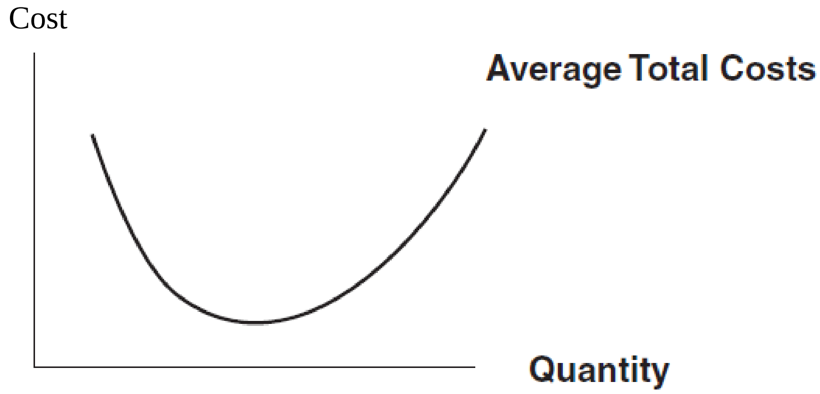
(i) Fixed Costs
(ii) Variable Costs
(iii)Average Total Costs
(iv)Marginal Costs

Fixed Costs are costs that do not vary with output e.g. rent, loan repayments etc.

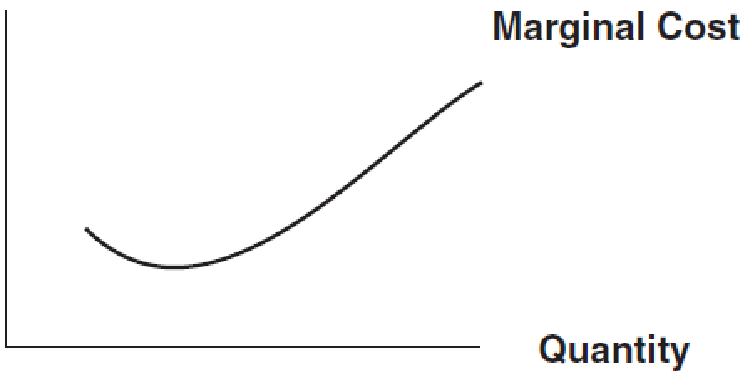
Variable Costs are costs that do vary with the level of output e.g. raw materials



Average Total Costs is made up of Average Fixed Costs and Average Variable Cost. It is the total cost per a unit being produced.



Marginal Cost is the extra cost of producing one extra unit



(4 marks)

(b) A firm's average fixed costs (AFC) of producing 6 units were 100 per unit.

Units of Output	Average Variable Cost
1	20
2	18
3	16
4	15
5	14
6	12
7	16
8	20

Calculate

(i) Fixed Costs

(ii) Average Total Cost of 4 units

(iii) Marginal Cost of the 7th unit

(iv) Total Cost of 5 units

Units of Output	Fixed Cost	Variable Cost	Total	A.F.C.	A.V.C.	A.T.C.	Marginal Cost
1	600	20	620		20		-
2	600	36	636		18		16
3	600	48	648		16		12
4	600	60	660	165	15		12
5	600	70	670		14		10
6	600	72	672	100	12		2
7	600	112	712		16		40
8	600	160	760		20		48

(i) A.F.C. = F.C. / Q then A.F.C. (100) x Q(6) = F.C. 600

(ii) A.F.C. = F.C. / Q then 660 / 4 = 165

(iii) Marginal Cost is total cost of current unit less the total cost (TC) of previous unit, therefore T.C. of unit 7 (712) less T.C. of unit 6 (672) = 40 M.C.

(iv) Total Cost = F.C. + V.C. therefore 600 + 70 = 670 T.C. **(4 X 2 marks)**

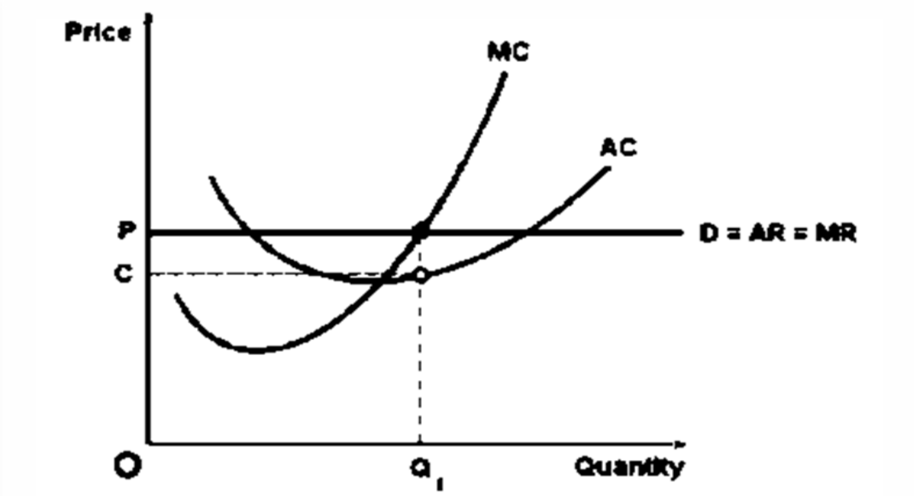
(8 marks)

(c) Distinguish between the Long Run and Short run time periods for a firm operating in a perfectly competitive market.

Use diagrams as appropriate.

Under perfect competition, there are many buyers and sellers in the industry. The firms are price takers and cannot influence price, as such they must always compete at their maximum level of efficiency. There are no barriers to entry. Firms attempt to maximize profits. In the short run, if firms are making a supernormal profit, new firms enter the market place and reduce profit as a result of increasing supply and driving the price downwards to a position where all firms in the industry will only make a normal profit, thereby enabling firms only earn normal profit in the long run. If firms are making a loss they exit the industry. Firms are therefore typically maximizing the utilization of resources and producing at all times at the minimum cost–point.

In the short-run, it is possible for an individual firm to make a profit. This situation is shown in this diagram, as the price or average revenue, denoted by P, is above the average cost denoted by C.



However, in the long period, positive profit cannot be sustained. The arrival of new firms or expansion of existing firms (if returns to scale are constant) in the market causes the (horizontal) demand curve of each individual firm to shift downward, bringing down at the same time the price, the average revenue and marginal revenue curve. The final outcome is that, in the long run, the firm will make only normal profit (zero economic profit). Its horizontal demand curve will touch its average total cost curve at its lowest point.

(6 + 2 marks for diagram)

[Total: 20 Marks]

SOLUTION 9

(i) List and explain the determinants of Demand, distinguishing between the movement along a demand curve and a shift in a demand curve. Use diagrams as appropriate.

The Law of Demand states that the quantity of a good demanded will fall as its price rises and will rise as the price falls - all things being equal. Quantity demanded of a good is therefore inversely related to price. The determinants of Demand are:

- Price of the good itself.
- Price of other goods/products, substitutes or compliments.
- A substitute is a good that exactly replaces a good. Increase the price of a substitute good and the demand for our good increases, and vice versa. A complement is a good that is consumed in conjunction with our good. Increase the price of a complement and you decrease the demand for our good, and vice versa.
- Income available. When income increases consumers buy more of most goods and vice versa. But, this does not happen for all goods. Goods that do increase in demand as income increases are known as normal goods (e.g. bread & milk). Goods that decrease in demand as income increases are known as inferior goods (black and white TVs).
- Price and availability of money and credit: If the cost of credit rises, the demand for a good will fall, and vice versa.
- Market size/Population: Any increases in population will cause demand to increase, this can be clearly shown in segmented markets e.g. the increased demand as a result of a baby boom, and vice versa.
- Tastes and Preferences: If tastes and preferences change, i.e. the desire to buy a particular fashion, demand will either increase for that coming into fashion and decrease for that going out of fashion.
- Expectations: Expectations of changes in any of the above will cause demand to change.
- Other influences (weather, temperature, reputation etc.).

Movement along a demand curve occurs when the price of the good itself changes.

[Diagram correctly labelled demonstrating a movement along a demand curve. Diagram explained.]

Shifts in a demand curve occur when any of the other factors change i.e. price of other goods, income, tastes/preferences and population.

[Diagram correctly labelled demonstrating a shift of a demand curve. Diagram explained.]

Marks allocated: (determinants = 4, 2 x diagrams explained = 2 x 3)

(ii) Explain what is meant by market equilibrium and analyse the effects on the equilibrium price and quantity of

a. The introduction of a new, cost-saving technology.

b. An increase in the price of a complementary good.

The market is defined as that place where buyers and sellers come together to exchange goods and services for a particular price and quantity.

It consists of both demand and supply. Demand representing consumer behaviour and supply represent firm behaviour.

[Diagram demonstrating equilibrium]

a. Introduction of a new, cost saving technology.

This causes the supply curve to shift down to the right, initially causing a period of disequilibrium, resulting in excess supply. Then over time, this disequilibrium pushes pressure on price to decrease, giving us a new equilibrium.

Overall impact: Decrease price, increase quantity.

[Diagram correctly labelled demonstrating the adjustment process]

b. A decrease in the price of a complementary good. A complementary good is a good that is consumed in conjunction with another good e.g. bread and butter. So to decrease the price of bread should cause the demand for butter to increase. This is demonstrated by a shift in the demand curve up and to the right. This brings the market to a situation of disequilibrium, causing excess demand to exist in the market place. This excess demand is then slowly eroded as price rises to bring the market to a new equilibrium. Overall impact: Increase price, increase quantity.

[Diagram correctly labelled demonstrating the adjustment process.]

Marks allocated: (2 x 5 marks, diagrams clearly labelled and explained)

SOLUTION 10

(a) Define unemployment and explain how it is measured.

The unemployed are those individuals who do not currently have a job and who have actively looked for work in the last 4 weeks (International Labour Organisation). Individuals who looked for work in the past beyond 4 weeks but are not looking currently are not counted as unemployed. The employed are individuals who currently have jobs. Thus, employed + unemployed = labour force. People who are not working and are not looking for work are not considered to be in the labour force such as a full-time student, homemaker, or retiree is not in the labour force. In summary, it represents those people in the labour force who are looking for work but who cannot find work.

Measurement of Unemployment

It is computed as:

$$\frac{\text{No. of Unemployed Workers}}{\text{Labour Force}} \times 100\%$$

OR

$$\frac{\text{Labour Force - No. of Employed Workers}}{\text{Labour Force}} \times 100\%$$

Marks allocation: (2 x 2 marks)

(b) Types of unemployment

Unemployment can be classified into 3 types:

i) Frictional unemployment

It represents unemployment that occurs naturally during the normal workings of an economy. It can occur for a variety of reasons such as people changing jobs, moving across the country, searching for new opportunities or taking their time after they enter the labour force to find appropriate jobs. It arises because it takes time for workers to be matched with suitable jobs and during this time, workers engaged in a job search will be registered as unemployed. The problem is that information is imperfect:

- employers are not fully informed about what labour is available .
- workers are not fully informed about what jobs are available .

To remedy frictional unemployment - better job information provided by job centres, local and national newspapers.

ii) Structural unemployment

This arises from changes in the pattern of demand and supply in the economy

- pattern of demand - declining demand - change in consumer tastes , goods out of fashion , competition from other industries etc.
- pattern of supply - methods of production - new techniques of production.
- unemployment may result from labour-saving techniques of production or a whole new technology which requires fewer workers with different skills.
- people cannot immediately take up jobs in other parts because there is a mismatch between workers' skills and job requirements due to
- not having sufficient education
- lack of skills and training E.g. when products such as the black and white television become obsolete, workers engaged in their production may become unemployed.

iii) Cyclical unemployment

This arises because the economy is in recession and there is deficiency of demand Unemployment increases during recession and decreases during expansion.

In any economy, the actual rate of unemployment = natural rate of unemployment + cyclical rate of unemployment. The natural rate of unemployment is defined as the rate of unemployment that prevails when output and employment are at the full level of employment level. Therefore, even though the economy is operating at the full employment level, there will still be people who are facing frictional and structural unemployment. In other words, natural rate of unemployment = frictional + structural unemployment.

Marks allocation: (3 x 2 marks)

(c) The costs of unemployment can be discussed from two perspectives, the cost to the unemployed and the cost to society.

Costs to the unemployed

- Even though, people may have more time to pursue leisure activities, they may be constrained in so doing by a lack of income.
- The unemployed may also suffer a loss of status.
- More likely to experience divorce, nervous breakdowns, bad health and are more likely to attempt suicide than the rest of the adult population
- Long periods of unemployment reduce the value of human capital. When people are out of work, their skills can become rusty, and they miss out on training in new methods.

Costs to society

- The main cost to society is the output which is lost. It is below potential due to unemployed resources.
- People will enjoy fewer goods and services than they could have consumed with higher employment
- The country will be producing inside its PPF
- Whilst government revenue will fall as unemployment rises, it will have to increase its spending on unemployment related benefits (such as unemployment benefit)
- In some countries there has been increased evidence of a link between crime and unemployment, particularly in the case of young unemployed men

Policies to reduce unemployment depend on the type of unemployment:

Frictional unemployment

The focus should primarily be on improving the information flows between employers and job-seekers. Agencies need to pool and provide information on the type of job opportunities that are available and on the kind of workers who are searching for employment.

In some countries, and the stated aim of the Government here in Rwanda, there is an unemployment benefits scheme. In Europe where such schemes are well-known, some have advocated that reducing such benefit can reduce frictional unemployment. Reduced benefit will discourage the unemployed from not seeking work.

Structural unemployment

This involves encouraging people to look more actively for jobs, if necessary, in other parts of the country. Encourage people to adopt a more willing attitude towards retraining and, if necessary, to accept some reduction in wages. Use wage subsidy programmes to encourage employers to hire and train those who otherwise lack the necessary skills to get the jobs

Cyclical unemployment

Adopt expansionary monetary policies by increasing money supply and reducing interest rates to stimulate aggregate demand or expansionary fiscal policy by increasing government expenditure and reducing tax.

Marks allocation: (2 x 2marks for costs and 3 x 2 marks for policies to reduce, students are expected to refer to the Rwandan economy)