

Internal Assessment Test - I

Sub:	Managerial Economics	Code:	18MBA12
Date:	04/11/2019	Duration:	90 mins
		Max Marks:	50
		Sem:	I
		Branch:	MBA

		Marks	OBE										
			CO	RBT									
Part A - Answer Any Two Full Questions (2* 20 = 40 marks)													
1	(a) Define Managerial Economics.	[03]	CO1	L1									
	(b) Distinguish between Micro and Macro Economics.	[07]	CO2	L2									
	(c) Rs. 11000 now to be invested for three years at six percentage rate half yearly- how much will be cumulative value?	[10]	CO1	L3									
2	(a) What is demand forecasting?	[03]	CO2	L1									
	(b) Explain methods of demand forecasting.	[07]	CO1	L2									
	(c) Explain Baumol's model of sales and revenue maximization.	[10]	CO3	L2									
3	(a) What is opportunity cost?	[03]	CO3	L1									
	(b) Explain incremental principle.	[07]	CO2	L2									
	(c) Define firm. Explain objectives of firm.	[10]	CO1	L2									
Part B - Compulsory (01*10=10 marks)													
4	(a) Rs. 20000 to be received after 5 years with interest rate 12% paid quarterly. How much is to be invested initially?	[]	CO1	L3									
	(b) Find the total value if	[]	CO3	L3									
	<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th>Initial Investment</th> <th>Rate of Interest annually</th> <th>Years</th> </tr> </thead> <tbody> <tr> <td>115000</td> <td>5%</td> <td>3</td> </tr> <tr> <td>5000</td> <td>2%</td> <td>1</td> </tr> </tbody> </table>	Initial Investment	Rate of Interest annually	Years	115000	5%	3	5000	2%	1			
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115000	5%	3											
5000	2%	1											

Course Outcomes		PO1	PO2	PO3	PO4	PO5	PO6	PO7
CO1:	The student will understand the application of Economic Principles in Management decision making.	L1						

CO2:	The student will learn the micro economic concepts and apply them for effective functioning of a Firm and Industry.	L2							
CO3:	The Student will be able to understand, assess and forecast Demand.	L3							
CO4:	The student will apply the concepts of production and cost for optimization of production.	L4							

Cognitive level	KEYWORDS
L1	List, define, tell, describe, identify, show, label, collect, examine, tabulate, quote, name, who, when, where, etc.
L2	summarize, describe, interpret, contrast, predict, associate, distinguish, estimate, differentiate, discuss, extend
L3	Apply, demonstrate, calculate, complete, illustrate, show, solve, examine, modify, relate, change, classify, experiment, discover.
L4	Analyze, separate, order, explain, connect, classify, arrange, divide, compare, select, explain, infer.
L5	Assess, decide, rank, grade, test, measure, recommend, convince, select, judge, explain, discriminate, support, conclude, compare, summarize.

PO1 - Knowledge application; PO2 - Analytical and logical thinking; PO3 - Team work; PO4 - Leadership; PO5 - life-long learning; PO6 - Analyze and practice aspects of business; PO7- Personal and Societal growth;

Answer Key/Solutions

INTERNAL ASSESSMENT TEST- 1

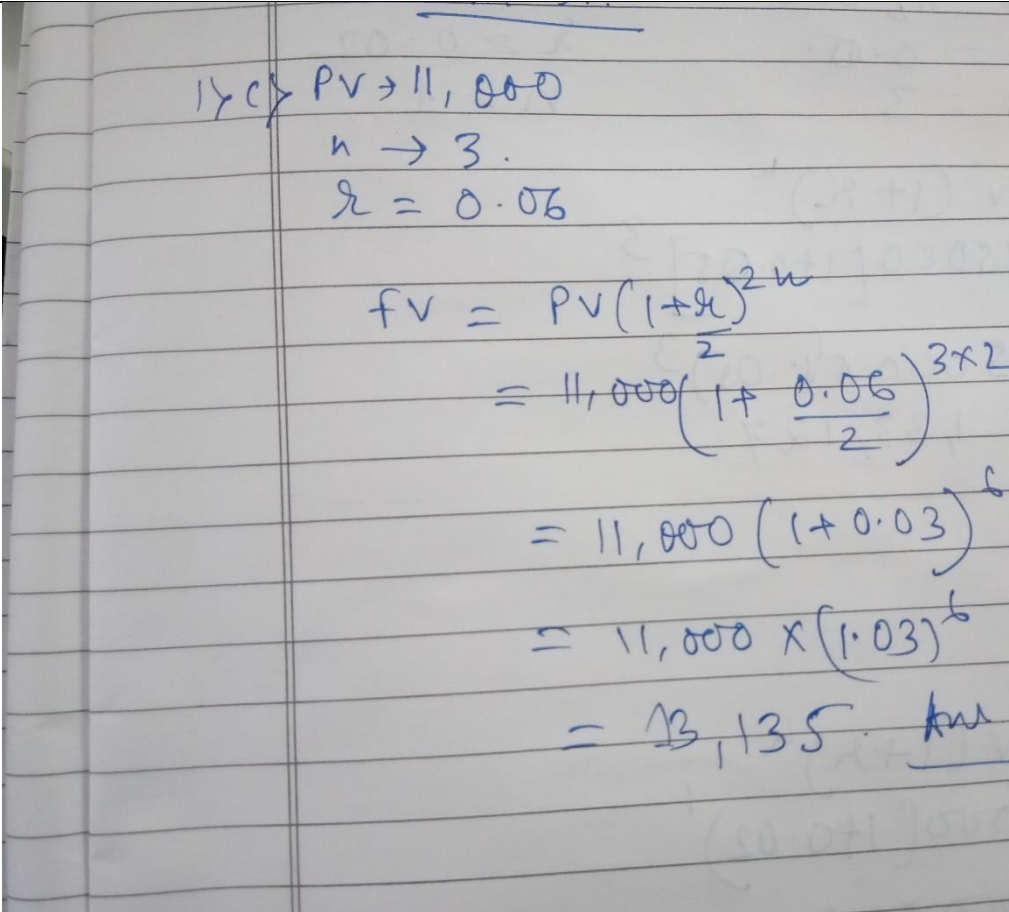
Question #	Description	Distribution		Marks
1	a) Define Managerial Economics. Managerial economics deals with the application of the economic concepts, theories, tools, and methodologies to solve practical problems in a business. In other words, managerial economics is the combination of economics theory and managerial theory.	3M	3M	20M
	b) Distinguish between Micro and Macro Economics	7M	7M	

Microeconomics:

- 1. It is the study of individual economic units of an economy.**
- 2. It deals with Individual Income, Individual prices, Individual output, etc.**
- 3. Its central problem is price determination and allocation of resources.**
- 4. Its main tools are demand and supply of a particular commodity/factor.**
- 5. It helps to solve the central problem of ‘what, how and for whom’ to produce. In the economy**
- 6. It discusses how equilibrium of a consumer, a producer or an Industry Is attained.**
- 7. Price is the main determinant of micro- economic problems.**
- 8. Examples are: Individual Income, Individual savings, price determination of a commodity, individual firm’s output, consumer’s equilibrium.**

Macroeconomics:

- 1. It is the study of economy as a whole and its aggregates.**
- 2. It deals with aggregates like national Income, general price level, national output, etc.**
- 3. Its central problem is determination of level of Income and employment.**
- 4. Its main tools are aggregate demand and aggregate supply of the economy as a whole.**
- 5. It helps to solve the central problem of full employment of resources in the economy.**
- 6. It is concerned with the determination of equilibrium level of Income and employment of the economy.**
- 7. Income is the major determinant of macroeconomic problems.**
- 8. Examples are: National Income, national savings, general price level, aggregate demand, aggregate supply, poverty, unemployment, etc.**

<p>C)</p>	 <p> $PV \rightarrow 11,000$ $n \rightarrow 3$ $r = 0.06$ </p> $FV = PV(1+r)^n$ $= 11,000 \left(1 + \frac{0.06}{2}\right)^{3 \times 2}$ $= 11,000 (1.03)^6$ $= 11,000 \times 1.19668$ $= 13,163.5$ <p style="text-align: right;"><u>Ans</u></p>	<p>10 M</p>	<p>10 M</p>	<p>20 M</p>
<p>2.A)</p>	<p>What is demand forecasting?</p> <p>Demand forecasting is a field of predictive analytics which tries to understand and predict customer demand to optimize supply decisions by corporate supply chain and business management.</p>	<p>03 M</p>	<p>03 M</p>	
<p>b)</p>	<p>Explain methods of demand forecasting.</p> <p>Survey Method:</p> <p>Survey method is one of the most common and direct methods of forecasting demand in the short term. This method encompasses the future purchase plans of consumers and their intentions. In this method, an organization conducts surveys with consumers to determine the demand for their existing products and services and anticipate the future demand accordingly.</p> <p>The survey method undertakes three exercises, which are shown in Figure-11:</p> <p>Survey Methods</p> <p>The exercises undertaken in the survey method (as shown in Figure-11) are discussed as follows:</p>	<p>07 M</p>	<p>07 M</p>	<p>20M</p>

i. Experts' Opinion Poll:

Refers to a method in which experts are requested to provide their opinion about the product. Generally, in an organization, sales representatives act as experts who can assess the demand for the product in different areas, regions, or cities.

Sales representatives are in close touch with consumers; therefore, they are well aware of the consumers' future purchase plans, their reactions to market change, and their perceptions for other competing products. They provide an approximate estimate of the demand for the organization's products. This method is quite simple and less expensive.

However, it has its own limitations, which are discussed as follows:

a. Provides estimates that are dependent on the market skills of experts and their experience. These skills differ from individual to individual. In this way, making exact demand forecasts becomes difficult.

b. Involves subjective judgment of the assessor, which may lead to over or under-estimation.

c. Depends on data provided by sales representatives who may have inadequate information about the market.

d. Ignores factors, such as change in Gross National Product, availability of credit, and future prospects of the industry, which may prove helpful in demand forecasting.

ii. Delphi Method:

Refers to a group decision-making technique of forecasting demand. In this method, questions are individually asked from a group of experts to obtain their opinions on

demand for products in future. These questions are repeatedly asked until a consensus is obtained.

In addition, in this method, each expert is provided information regarding the estimates made by other experts in the group, so that he/she can revise his/her estimates with respect to others' estimates. In this way, the forecasts are cross checked among experts to reach more accurate decision making.

Every expert is allowed to react or provide suggestions on others' estimates. However, the names of experts are kept anonymous while exchanging estimates among experts to facilitate fair judgment and reduce halo effect.

The main advantage of this method is that it is time and cost effective as a number of experts are approached in a short time without spending on other resources. However, this method may lead to subjective decision making.

iii. Market Experiment Method:

Involves collecting necessary information regarding the current and future demand for a product. This method carries out the studies and experiments on consumer behavior under actual market conditions. In this method, some areas of markets are selected with similar features, such as population, income levels, cultural background, and tastes of consumers.

The market experiments are carried out with the help of changing prices and expenditure, so that the resultant changes in the demand are recorded. These results help in forecasting future demand.

There are various limitations of this method, which are as follows:

a. Refers to an expensive method; therefore, it may not be affordable by small-scale organizations

b. Affects the results of experiments due to various social-economic conditions, such as strikes, political instability, natural calamities

	<p>Statistical Methods:</p> <p>Statistical methods are complex set of methods of demand forecasting. These methods are used to forecast demand in the long term. In this method, demand is forecasted on the basis of historical data and cross-sectional data.</p> <p>Historical data refers to the past data obtained from various sources, such as previous years' balance sheets and market survey reports. On the other hand, cross-sectional data is collected by conducting interviews with individuals and performing market surveys. Unlike survey methods, statistical methods are cost effective and reliable as the element of subjectivity is minimum in these methods.</p> <p>These different statistical methods are shown in Figure-12:</p> <p>Statistical Methods</p> <p>The different statistical methods (as shown in Figure-12).</p> <p>Trend Projection Method:</p> <p>Trend projection or least square method is the classical method of business forecasting. In this method, a large amount of reliable data is required for forecasting demand. In addition, this method assumes that the factors, such as sales and demand, responsible for past trends would remain the same in future.</p> <p>In this method, sales forecasts are made through analysis of past data taken from previous year's books of accounts. In case of new organizations, sales data is taken from organizations already existing in the same industry. This method uses time-series data on sales for forecasting the demand of a product.</p>			
c)	<p>Explain Baumol's model of sales and revenue maximization.</p> <p>Prof. Baumol in his book <i>Business Behaviour, Value and Growth (1967)</i> has presented a managerial theory of the firm based on sales maximisation. He discusses two models of sales maximisation: a static model and a dynamic model. We shall analyse only his static model of sales maximisation with its variants of single product model without advertisement.</p> <p>Assumptions:</p>	10 M	10 M	

The model is based on the following assumptions:

1. There is a single period time horizon of the firm.
2. The firm aims at maximising its total sales revenue in the long run subject to a profit constraint.
3. The firm's minimum profit constraint is set competitively in terms of the current market value of its shares.
4. The firm is oligopolistic whose cost curves are U-shaped and the demand curve is downward sloping. Its total cost and revenue curves are also of the conventional type.

The Model:

Baumol's findings of oligopoly firms in America reveal that they follow the sales maximisation objective. According to Baumol, with the separation of ownership and control in modern corporations, managers seek prestige and higher salaries by trying to expand company sales even at the expense of profits.

Being a consultant to a number of firms, Baumol observes that when asked how their business went last year, the business managers often respond, "Our sales were up to three million dollars". Thus, according to Baumol, revenue or sales maximisation rather than profit maximisation is consistent with the actual behaviour of firms.

Baumol cites evidence to suggest that short-run revenue maximisation may be consistent with long-run profit maximisation. But sales maximisation is regarded as the short-run and long-run goal of the management. Sales maximisation is not only a means but an end in itself.

He gives a number of arguments in support of his theory.

1. A firm attaches great importance to the magnitude of sales and is much concerned about declining.
2. If the sales of a firm are declining, banks, creditors and the capital market are not prepared to provide finance to it.
3. Its own distributors and dealers might stop taking interest in it.
4. Consumers might not buy its product because of its unpopularity.
5. Firm reduces its managerial and other staff with fall in sales.

		<p>6. But if firm's sales are large, there are economies of scale and the firm expands and earns large profits.</p> <p>7. Salaries of workers and management also depend to a large extent on more sales and the firm gives them bonus and other facilities.</p> <p>By sales maximisation, Baumol means maximisation of total revenue. It does not imply the sale of large quantities of output, but refers to the increase in money sales (in rupee, dollar, etc.). Sales can increase up to the point of profit maximization where the marginal cost equals marginal revenue.</p> <p>If sales are increased beyond this point money sales may increase at the expense of profits. But the oligopolistic firm wants its money sales to grow even though it earns minimum profits. Minimum profits refer to the amount which is less Quantity than maximum profits. The minimum profits are determined on the basis of firm's need to maximize sales and also to sustain growth of sales.</p> <p>Minimum profits are required either in the form of retained earnings or new capital from the market. The firm also needs minimum profits to finance future sales. Further, they are essential for a firm for paying dividends on share capital and for meeting other financial requirements.</p>			
3	a	<p>What is opportunity cost?</p> <p>In microeconomic theory, the opportunity cost, or alternative cost, of making a particular choice is the value of the most valuable choice out of those that were not taken</p>	3 M	3M	20 M
	b	<p>Explain incremental principle.</p> <p>By increasing in the production, the total cost of the product raises and simultaneously profit also rises.</p> <p>Practicality in the business:</p> <p>How much we extra we should produce to get the best profits and how much extra cost is incurring for the extra production.</p> <p>It is related to the marginal cost and marginal revenue concepts in economic theory. Incremental concept involves estimating the impact of decision alternatives on costs and revenues, emphasizing the changes in total cost and total revenue resulting from changes in prices, products, procedures, investments or whatever else may be at stake in the decisions. The two basic components of incremental reasoning are:</p> <ol style="list-style-type: none"> 1. Incremental cost 2. Incremental revenue. 	07 M	07 M	

	<p>Incremental cost may be defined as the change in total cost resulting from a particular decision. Incremental revenue is the change in total revenue resulting from a particular decision.</p> <p>The incremental principle may be stated as follows: A decision is a profitable one if—</p> <p>a) it increases revenue more than cost b) it decreases some costs to a greater extent than it increases others c) it increases some revenues more than it decreases others and d) it reduces cost more than revenues.</p>			
C)	<p>Define the term “Entrepreneur”. Explain its functions.</p> <p>Firm is a business organisation that buys or hires factors of production in order to produce goods and services that can be sold at a profit. In some cases, these other objectives help a firm pursue profit maximization. In other cases, they prevent a firm from maximizing profit.</p>	10 M	10 M	
	<p>1. Profit Maximisation: In many firms, there is a separation of ownership and control. Those who own the company (shareholders) often do not get involved in the day to day running of the company.</p> <p>This is a problem because although the owners may want to maximise profits, the managers have much less incentive to maximise profits because they do not get the same rewards, (share dividends)</p> <p>Therefore managers may create a minimum level of profit to keep the shareholders happy, but then maximise other objectives, such as enjoying work, getting on with other workers. (e.g. not sacking them) This is the problem of separation between owners and managers.</p> <p>This ‘principal-agent’ problem can be overcome, to some extent, by giving managers share options and performance related pay although in some industries it is difficult to measure performance.</p> <p>More on profit-satisficing.</p> <p>2. Sales maximisation</p> <p>Firms often seek to increase their market share – even if it means less profit. This could occur for various reasons:</p> <p>Increased market share increases monopoly power and may enable the firm to put up prices and make more profit in the long run.</p> <p>Managers prefer to work for bigger companies as it leads to greater prestige and higher salaries.</p> <p>Increasing market share may force rivals out of business. E.g. the growth of supermarkets have led to the demise of many local shops. Some firms may actually engage in predatory pricing which involves making a loss to force a rival out of business.</p> <p>3. Growth maximisation</p> <p>This is similar to sales maximisation and may involve mergers and takeovers. With this objective, the firm may be willing to make lower levels of profit in order to increase in size and gain more market share. More market share increases their monopoly power and ability to be a price setter.</p>			20 M

4. Long run profit maximisation

In some cases, firms may sacrifice profits in the short term to increase profits in the long run. For example, by investing heavily in new capacity, firms may make a loss in the short run but enable higher profits in the future.

5. Social/environmental concerns

A firm may incur extra expense to choose products which don't harm the environment or products not tested on animals. Alternatively, firms may be concerned about local community / charitable concerns.

Some firms may adopt social/environmental concerns as part of its branding. This can ultimately help profitability as the brand becomes more attractive to consumers.

Some firms may adopt social/environmental concerns on principal alone – even if it does little to improve sales/brand image.

6. Co-operatives

Co-operatives may have completely different objectives to a typical PLC. A co-operative is run to maximise the welfare of all stakeholders – especially workers. Any profit the co-operative makes will be shared amongst all members.

a)

Handwritten mathematical derivation on lined paper:

$$\begin{aligned} 4) a) \quad & FV = 20,000. \\ & n = 5. \\ & r = 0.12. \\ & FV = PV \left(1 + \frac{r}{4} \right)^{4 \times n} \\ \Rightarrow & 20,000 = PV \left[1 + \frac{0.12}{4} \right]^{5 \times 4} \\ \Rightarrow & 20,000 = PV \left[1 + 0.03 \right]^{20} \\ \Rightarrow & 20,000 = PV \times (1.03)^{20} \\ \Rightarrow & PV = \frac{20,000}{(1.03)^{20}} = \frac{20,000}{1.81} \\ & = 11,049.72 \end{aligned}$$

4

10
M

10
M

20 M

b)

Part 1:
 $PV = 115,000$
 $r = 0.05$
 $n = 3$
 $FV = PV (1+r)^n$
 $= 115,000 (1+0.05)^3$
 $= 133,127$

Part 2:
 $PV = 5000$
 $r = 0.02$
 $n = 1$
 $FV = PV (1+r)^n$
 $= 5000 (1+0.02)^1$
 $= 5100$

10
M

10
M