

Engineering Economics

T1

Total Marks: 20 marks, Time allocated: 45 minutes

Short answer type

Instructions: Read the question properly and answer as per marks allocated.
You are expected to write descriptively. All the best.

Section A: Each question is of max 2 marks

1. What are the 3 important Economic questions? Explain equity and efficiency with an example in the Indian context. (CO1)

1. What to produce? , How to produce? , Whom to produce?

efficiency :- supplying make good use of all scarce resources

equity :- distributing resources equally.

2. The field of Economics is divided into 2 sub fields. State them below with atleast 3 differences: (CO1)

2 fields of economics are micro economics & macro eco.

* micro-economics

1. It is the study of economy at individual level such as household firms etc
2. It addresses issues at individual level i.e. concern about well being of individuals.
3. Example managing individuals income, economy at household level

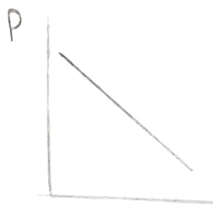
Macro economics.

1. This is the study of economy at national level
2. This is concerned about a nation as a whole.
3. ex. it try to resolved unemployment, inflation etc

3. In the super luxury cars, describe the relationship between price and quantity demanded. What kind of product is a luxury car? (CO3)

The price & quantity demanded is shown in graph, by the law of quantity demand, as the price increases there is a decrease in quantity demanded.

luxury car is a branded product i.e. limited no of firms will have key resources / access to produce it (monopolistic).

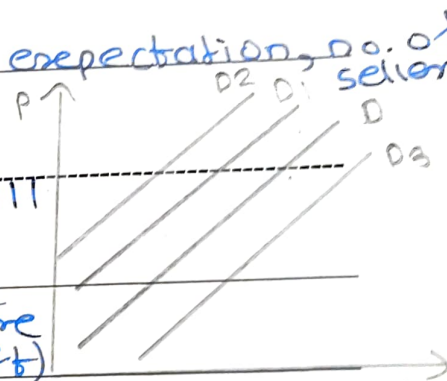


so the luxury car will follow the normal demand curve in which the price increases the quantity of car will decrease demanded

4. Using 'ice cream' as a product, build a supply function with atleast 3 determinants of supply. (CO1, CO2, CO3)

3 determinants of supply - input, expectation, no. of sellers.
initial supply curve is D

- 1) input (D₁) :- If the price of sugar increase then the supply curve will shift to D₁ (i.e. left)
 - 2) expectation :- if seller stores the today's stock of ice cream for future sale supply curve will shift to D₂ (left)
 - 3) no. of sellers increase then supply will increase (at D₃)
5. Describe the concept of 'Invisible hand' in attaining equilibrium in a Free Market Economy. (CO1)



The economical situation attains the equilibrium after a certain period of time in market that is if the MC is above or below equilibrium point

the factors in economy are such that this price will come to equilibrium after some time this is what we called invisible hand.

6. What is the relationship between Marginal Product and Average Product? (CO1, CO2, CO3)

Marginal product is the increase in output when addition unit of input increases where as average product is total no. of product per quantity of input.

Section B: Each question carries 4 marks. (CO1, CO2)

1. Mona has just graduated from a well known technical College in Pune. She is a fitness enthusiast and has decided to forego placement to set up a juice bar-FRESH-O. Having studied engineering economics, she knows that costing is an important part of setting up a successful business. She has calculated the following table of costs for each unit (Glass) of juice she sells.

- Calculate the AVC, ATC and MC.
- Using your understanding of costs and their relationship, how many units of juice should Mona produce to minimize costs?

Quantity Q	Total Variable Cost (TVC)	Total Cost (TC) <i>Fixed cost</i>	Average Variable cost	Average cost	Marginal Cost	TC
0	0	20	-	-	-	20
1	30	20	30 30 50	20 50	0 30	50
2	50	20	25 25	10 35	0 20	70
3	60	20	20 20	66 26	0 10	80
4	70	20	17.5 17.5	5 22.5	0 10	90
5	90	20	18 18	4 22	0 10	110
6	120	20	20 20	20 20 23.33	0 30	140

2.14

2. Answer the following: (CO1, CO2, CO3)

Describe the following:

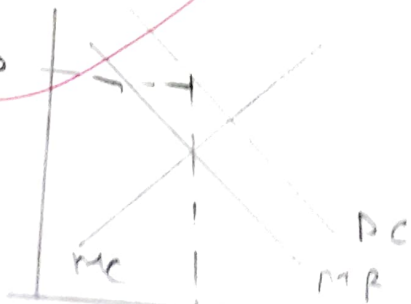
1. Market structure for each- fertilizers, railway ticket booking services, carbonated beverages in India.
2. With each of the above product, describe how firms making pricing decisions.

1. Railway ticket booking :- monopoly (as hosted by government)
Carbonated beverages in India :- monopolistic (as many brands with similar but not identical product)
Fertilizers :- perfectly competitive (as many firms delivering same goods)

for Railway ticket booking The price making decision will be $P > MC = MR$ i.e. price will be greater than marginal revenue.

for carbonated beverages :- similar as monopoly
for fertilizers :- price = $MC = MR$.

all the three will determine price by demand curve correspond to where MC & MR intersect.



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Engineering Economics

T1 (Set 2)

Total Marks: 20 marks, Time allocated: 45 minutes

Short answer type

Instructions: Read the question properly and answer as per marks allocated.

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Section A: Each question is of max 2 marks

1. What are the 3 fundamental questions of Economics? (CO1)

1] What to produce?

2] How to produce

3] Whome to produce for?

2. State 3 differences between Micro Economics and Macro Economics (CO1)

Macro economics	Micro Economics
1. Macro economics deals with many factors as whole, eg. country's economy.	1. Micro economics deals with single factor/ individuals - individuals.
2. factors considering - GDP, NI, tax, unemployment, etc.	2. factors considering - individuals what to buy, what to sell
3. Scale - country's economy, world's economy	3. Scale - Household, firm, individuals, etc.

3. What is the difference between need, want and demand. (CO3)

Need :- The goods or service without which we can not survive. eg. water, food.

Want - The addition unit to needs which gives pleasure to us. eg. food is need, tasty food is want.

Demand - Demand is something which is surplus to need & want. eg. we want food for which is particularly that baked with this method or particular brand. eg. clothes is need, I want shirt is want, and I want of shirt of Gucci brand is demand.

4. Describe the relationship between quantity and price supplied of the product milk.
(CO1, CO2, CO3)

If production of milk is abundant enough, i.e. quantity of milk provided is increase, and price decreases. If i.e. supply is not enough milk is not in enough quantity, ^{dem} price increases. If want reduce decrease in price of milk, that milk used to make ~~sur~~ products such as milk powder, ghee, etc. It may happens that production of that products affects the economy of other country.

5. Role of government in a mixed economy (CO1)

According to Principle of economy, invisible hands works only if the government (govt.) of that country is ^{sometimes} everyone. Capable of control on ^{economy} Govt. can make [^] better trade off.

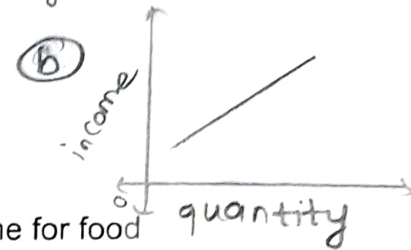
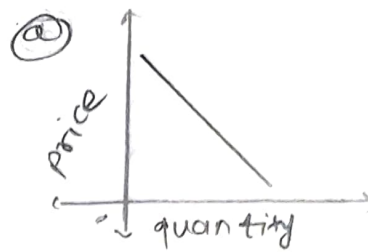
By using policies, subsidies, govt. can control efficiency and equity in economy.

6. Explain Trade off with an example from your daily life (CO1, CO2, CO3)

Trade off - is if we want something ^{that we like}, need to something give up which we also like. eg. As I am college

student, I am going college instead of wasting time in watching movies or playing video games.

Also I ~~pt~~ pay college fees instead of wasting it on movie tickets.



Section B: Each question carries 4 marks. (CO1, CO2)

1. Write short answers to:

- the relationship of quantity demanded with price of gold
- The relationship between quantity demanded and income for food items like rice, wheat and vegetables

→ a. 1] As law of demand, all other items equal, the price and demand are inversely proportional. As gold found lesser in quantity, so it has low supply. As demand of gold increases, price decreases. Because gold is scarce in nature, marginal changes affects on it.

2]. If income for food items increases the quantity demanded for that also increases. As income increases, producers are inteded to produce more and make more profit of out of that so, supply for that items ~~aturno~~ automatically increased. Also demand increased.

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2. Answer the following: (CO1, CO2, CO3)

a. What is utility?

b. Why is the price of water so less despite high utility. Why is the price of jewellery diamonds so high despite low functional utility.

a. Utility - The usefulness of product to people, society, firm etc in given condition to produce some functionalities.

b. \Rightarrow Water is used in day-to-day life so frequently, having high utility. But quantity of water present is high. i.e. Water present in abundant quantity. If we remove one cup of water from that quantity makes no change. That's why despite of high utility price of water is so less.

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2] The price of jewellery, diamonds are so high despite of low functional utility because jewellry (gold, silver) & diamonds are in less quantity in nature. If we remove a cup of gold out of it makes significant changes. So. it has high price.