Shahjalal University of Science &Technology, Sylhet

Department of Computer Science and Engineering

Course No: ECO 105d

Assignment No: 01

Creating Question along with answer

<u>Submitted To</u>

Eshrath Sadiya

Lecturer

Department of Economics

<u>Submitted By</u>

Group No : 08

Group Members :

1. 2018331056
2. 2018331057
3. 2018331059
4. 2018331060
5. 2018331062

Submission date: 07.12.2020

Part - A

(a)

Problem statement:

What is price elasticity of demand? State the determinants of price elasticity of demand?

Solution:

The price elasticity of demand is the percentage change in quantity demanded divided by the percentage change in price.

The determinants of price elasticity of demand are:

i. Number of substitutes:

If there is more substitutes for a good in the market then the price elasticity of demand of that good will be higher.

ii. Necessities versus luxuries:

The price elasticity of demand of necessities are lower where it is higher for luxuries.

iii. Percentage of one's budget spent on that good:

If a consumer spent more money on a particular good, its price elasticity will be higher.

iv. Time:

In long run price elasticity of demand is higher than short run.

(b)

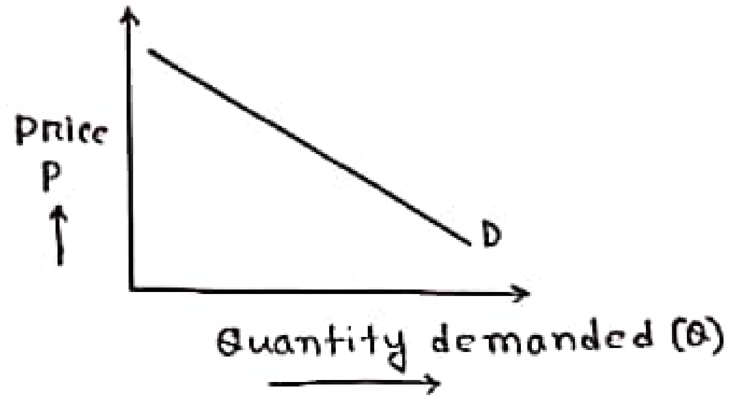
Problem statement:

Define and graphically show: elastic, inelastic, unit elastic and perfectly elastic elasticity of demand.

Solution:

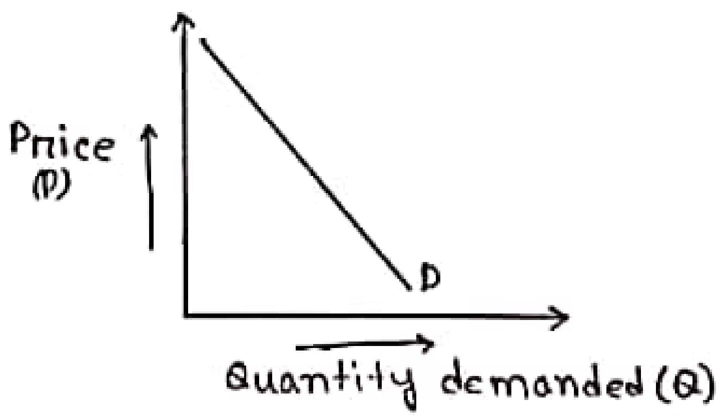
Elastic:

If the price elasticity of demand of a good is greater than 1, it is called elastic.



Inelastic:

If the price elasticity of demand is less than 1 ($\epsilon_p < 1$), it is called inelastic.



Unit elastic:

If the elasticity of demand is equal to 1 ($\epsilon_p = 1$), it is called unit elastic.

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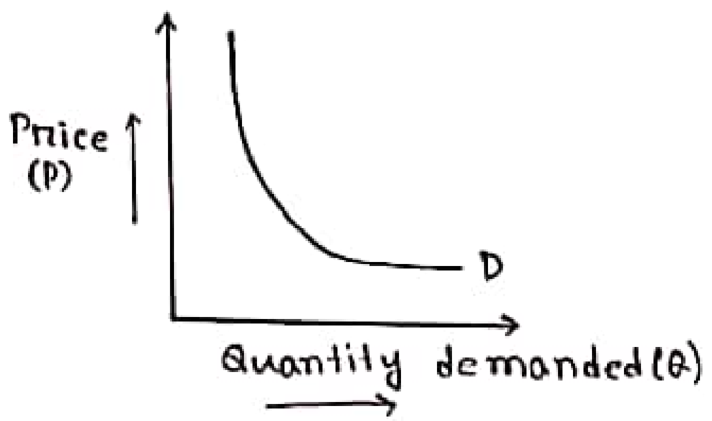
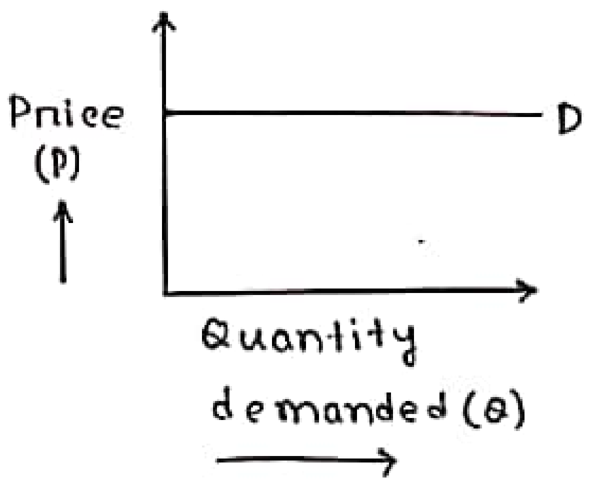


Perfectly elastic:

If a small change in price causes infinitely large change in quantity demanded ($E_p = \infty$), it is called perfectly elastic.



(C)

Problem statement:

Calculate the price elasticity of demand of a good from the following informations and determine the nature of the good: elastic or inelastic.

$Q_1 = 400$ kg, $Q_2 = 300$ kg, $P_1 = 50$ TK and $P_2 = 58$ TK

Solution:

Here, $\Delta Q = Q_2 - Q_1$

$= (300 - 400)$ kg $= -100$ kg

$\Delta P = P_2 - P_1$

$= (58 - 50)$ TK $= 8$ TK

$$Q_{avg} = \frac{Q_1 + Q_2}{2} = \frac{400 + 300}{2}$$

$= 350$ kg

$$P_{avg} = \frac{P_1 + P_2}{2} = \frac{50 + 58}{2}$$

$= 54$ TK

We know,

$$\epsilon_p = \left| \frac{\Delta Q}{\Delta P} \times \frac{P_{avg}}{Q_{avg}} \right|$$

$$= \left| \frac{-100}{8} \times \frac{54}{350} \right|$$

$$= 1.928$$

As $\epsilon_p > 1$, the nature of the good is elastic.

(d)

Problem statement:
Between salt and pepsi which one is more elastic and why?

Solution:
Salt is a necessary good. So, its price elasticity is less than 1 ($\epsilon_p < 1$) and so, it is inelastic.
On the other hand, pepsi has many substitutes in the market. So its price elasticity is greater than one ($\epsilon_p > 1$).
So, pepsi is more elastic than salt.

(e)

Problem statement:

State the law of demand and law of supply.

Solution:

The law of demand says that at higher prices, buyer will demand less of an economic good.

The law of supply says that at higher prices, sellers will supply more of an economic goods.

Suppose, the price of pepsi rises by 5%. Then the demand of this product will decreases where as if price falls consumers will buy more. If price of goods rises sellers will supply more goods to market to make profit.

Part-B

(a) What is money? What are the functions of money? Explain them. Why isn't credit card a form of money? (1+3+5)

Ans. Any good that is widely accepted for purposes of exchange (payment for goods and services) and in the repayment of debts.

There are three functions of money.

1. Medium of Exchage: A Function of money, anything that is generally acceptable in exchange for goods and services.

2. Unit of Account: A function of money, a common measure in which relative values are expressed.

3. Store of Value: A function of money, the ability of an item to hold value over time.

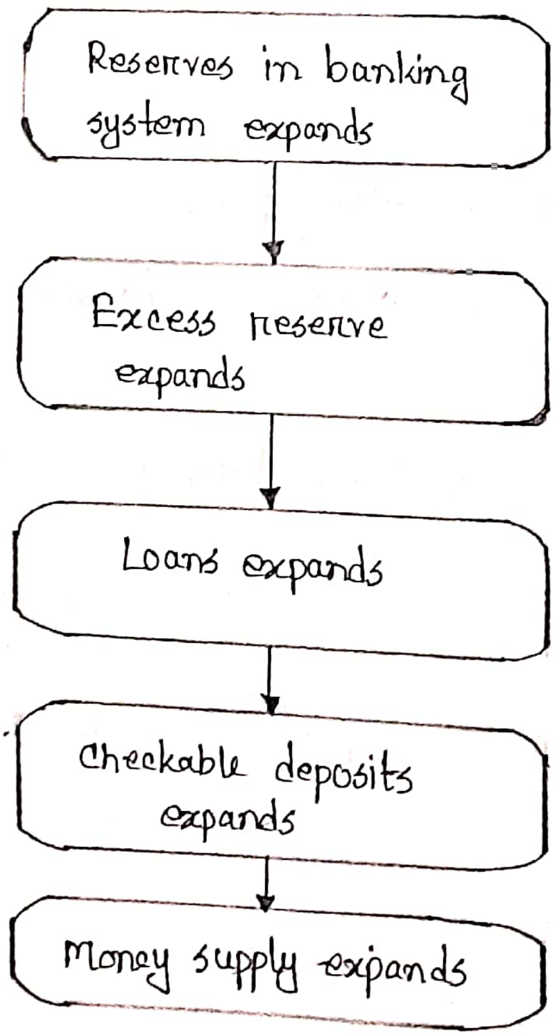
Money is defined as an officially-issued legal tender generally consisting of currency and coin. Legal tender is a type of payment that can lawfully be used to meet financial obligations. Money, as legal tender, is a commodity or asset, or an officially-issued currency or coin that can be legally exchanged for something of equal value, such as a good or service, or that can be used in payment of a debt.

Credit cards are not really a form of money. They are line of credit given to you which you can use in lieu of making a payment with your own money. When anyone swipe his card or use it for an online purchase, what he is really doing is asking his card company to make the payment on his behalf with the promise that he'll pay it back.

(b) Draw a flow chart for the money supply expansion process.

If the ~~central~~ bank creates $600 millon in new reserves, what is the maximum change in checkable deposits that can occur if the required reserve ratio is 10 percent. (3+7).

Ans. The flow-chart for the money supply expansion process is given below:



Given,

the required reserve ratio, $r = 10\%$

$= \frac{1}{10}$

the change in reserves resulting from the original injection of funds, $\Delta R = \$ 600$ million

$\therefore$ Maximum change in checkable deposits $= \frac{1}{r} \times \Delta R$

$= \frac{1}{1/10} \times \$600$ million

$= \$6000$ million

$= \$6$ billion.

(Ans.)

(a) What is monetary policy and fiscal policy? Explain the key functions of commercial bank.

Monetary policy : Monetary policy is changing in the money supply, or the rate of growth of the money supply, to achieve particular macroeconomic goals.

Fiscal policy : Changes in government expenditures and / or taxes to achieve goals, such as low unemployment stable prices and economic growth.

The functions of commercial bank is given below :

i) Accepting of deposits.

ii) Advancing loans.

iii) Credit creation.

iv) Financing foreign tread.

v) Agency services.

vi) Miscellaneous services to customers.