AMERICAN INTERNATIONAL UNIVERSITY-BANGLADESH

Final Assignment Total Marks: 20

FACULTY OF BUSINESS ADMINISTRATION

DEPARTMENT OF BBA

PRINCIPAL OF ECONOMICS

Fall 2023-2024

Section: I

Group No: J

Course Teacher

AHMED FARAH ULFAT

Submitted By

NAHID HASAN NOBIL	22-46321-1	Math 1
ABRAR SHAKIL OISHIK	22-46257-1	Math 2
IFTEKHAR ALAM	22-46376-1	Math 3
MD. RIFAT UL ISLAM KHAN	22-46016-1	Math 4
TRIDIB SARKAR	22-46444-1	Math 5

Date of Submission: December 21, 2023

Name: Nahid Hasan Nobil
ID: 22-46321-1
Sec: I

Ans no: 1

nominal GdP = $\sum(P_C \times Q_C)$; Real GdP = $\sum(P_B \times Q_C)$

(a) for 2010:

nominal GDP = $(9 \times 200) + (20 \times 150)$

= 4800

Ans.

Real GDP = $(9 \times 200) + (20 \times 150)$

= 4800

A

GDP deflator = $\dfrac{\text{Nominal GDP 2010}}{\text{Real GDP 2010}}$

$= \dfrac{4800}{4800} = 1$

Ans.

for 2011:

nominal GDP = $(10 \times 300) + (22 \times 200)$

= 7400 A

Real GDP = $(9 \times 300) + (20 \times 200)$

= 6700

A

GDP deflator = $\dfrac{7400}{6700}$

= 1.104

A

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for 2012

Nominal GDP = $(12 \times 300) + (24 \times 200)$

$= 8400$

Real GDP = $(9 \times 300) + (20 \times 200)$

$= 6700$

GDP deflator = $\frac{8400}{6700}$

$= 1.25$

(b) for 2011:

percentage change in nominal GDP = $\frac{7400 - 4800}{4800} \times 100$

$= 54.16\%$

percentage change in Real GDP = $\frac{6700 - 4800}{4800} \times 100$

$= 39.58\%$

percentage change in GDP deflator = $\frac{1.104 - 1}{1} \times 100$

$= 10.4\%$

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for 2012:

$$\text{percentage change in nominal GDP} = \frac{8400-7400}{7400} \times 100$$
$$= 13.51\%$$

$$\text{percentage change in Real GDP} = \frac{6700-6700}{6700} \times 100$$
$$= 0\%$$

$$\text{percentage change in GDP deflator} = \frac{1.25-1.104}{1.104} \times 100$$
$$= 13.23\%$$

Name : Abrar Shakil Oishik

Id : 22-46257-1 (Math-2)

Sec : I

2) (a) CPI of 2007 is $= \dfrac{(50\times10)+(20\times13)}{(50\times10)+(20\times13)} \times 100$

$= 100\%$

CPI of 2008 is $= \dfrac{(30\times10)+(32\times13)}{(50\times10)+(20\times13)} \times 100$

$= 94.21\%$

CPI of 2009 is $= \dfrac{(90\times10)+(44\times13)}{(50\times10)+(20\times13)} \times 100$

$= 193.68\%$

b) Inflation Rate for 2008 is $= \dfrac{CPI(2008) - CPI(2007)}{CPI(2007)} \times 100$

$= \dfrac{94.21 - 100}{100} \times 100$

$= -5.79\%$

Inflation Rate for 2009 is $= \dfrac{CPI(2009) - CPI(2008)}{CPI(2008)} \times 100$

$= \dfrac{193.68 - 94.21}{94.21} \times 100$

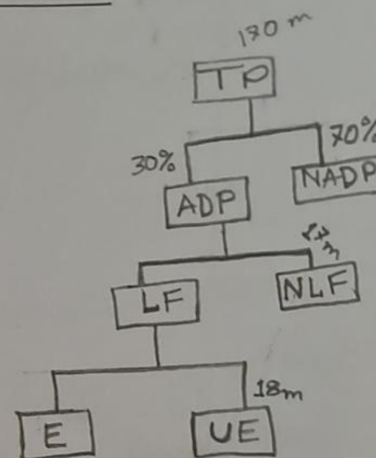
$= 105.58$

Name: IFTEKHAR ALAM
ID: 22-46376-1
Section: I

Answer to the Question no. → 3

(a)

Given that,



Total Population = 170 million &
rate of Not adult Population 70%

$\therefore$ Not adult population = (170×0.70) million
= 119 million

$\therefore$ Adult population = $(170 - 119)$ million
= 51 million

here, Not in labor population is 17 million and unemployed 18 million

$\therefore$ Labor force = $(51 - 17) = 34$ million

$\therefore$ Employed people = $(34 - 18) = 16$ million

$\therefore$ Labor force Population = $\left(\frac{34}{51} \times 100\%\right) = 66.667\%$

$\therefore$ Employment rate = $\left(\frac{16}{34} \times 100\%\right) = 47.059\%$

Ans.

22-46376-1

(b) Four reasons why firms might pay efficiency wages:

i) Worker health:

Paying higher wages allows workers to eat better, makes them healthier, more productive.

ii) Worker turnover:

Hiring and training new workers is costly. Paying high wages to existing workers gives more incentive to slay, reduces turnovers.

iii) Worker Quality:

Offering higher wages attracts better job applicants, increases quality of the firm's workforce.

iv) Worker effort:

If market wages above equilibrium wage, there aren't enough jobs to go around, so workers have more incentive to work not shirk.

MD. RIFAT UL ISLAM KHAN
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SEC : I

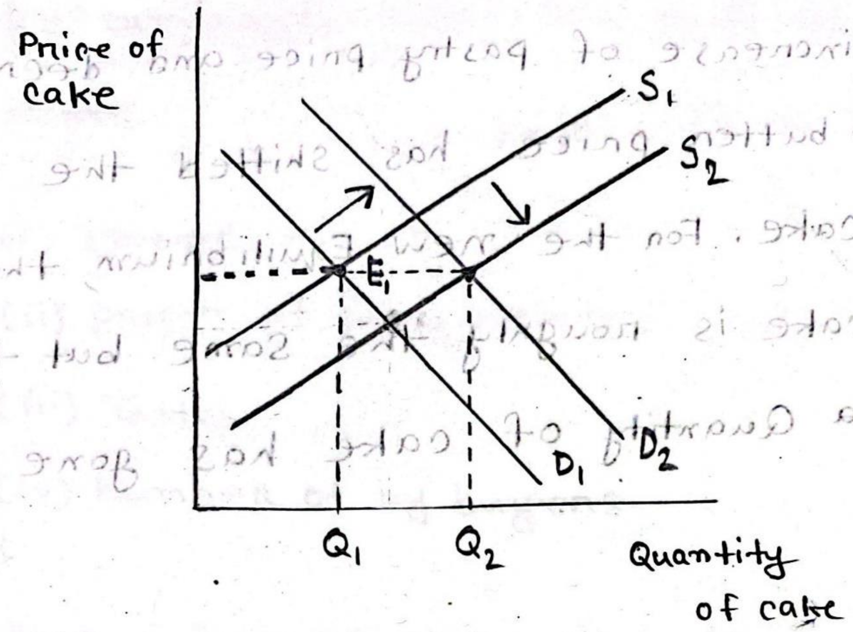
4(a). When the price of pastry increases, it will result in lessen demand from ~~to~~ consumers and the demand of cake will increase as cake is a substitute good of pastry.

As a result, we will see a right shift on the demand curve of cake as it's demand will go up due to the price increase of pastry.

On the other hand, As butter price decreased (a key ingredient for cakes), it will lead to a reduction in production costs for cake producers.

This reduction in production cost could lead to an increase in the supply of cakes.

So, the supply curve of cakes will also take a right shift.



S_1 = previous supply curve

S_2 = Shifted supply curve

D_1 = Initial demand curve

D_2 = Shifted demand curve

E_1 = Old Equilibrium

E_2 = New Equilibrium

Q_1 = previous Quantity of cake

Q_2 = New Quantity of Cake

From the diagram, it can be seen that the increase of pastry price and decrease of ~~d~~ butter price has shifted the Equilibriu of cake. For the new Equilibrium, the price of cake is roughly the same but the ~~dema~~ Quantity of cake has gone up.

4 (b).

Determinants that can shift the demand curve :

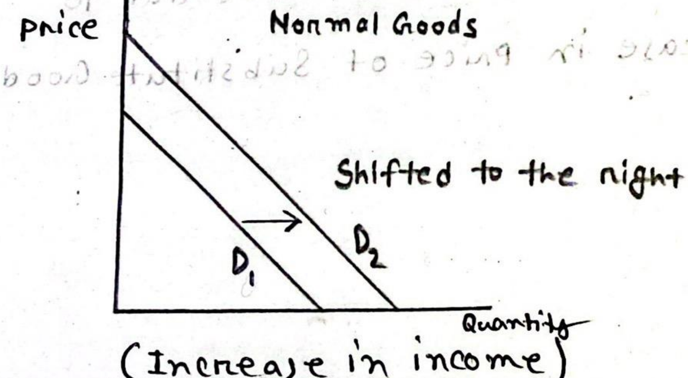
(i) Income

(ii) Prices of ~~re-ta~~ related goods

(iii) Tastes

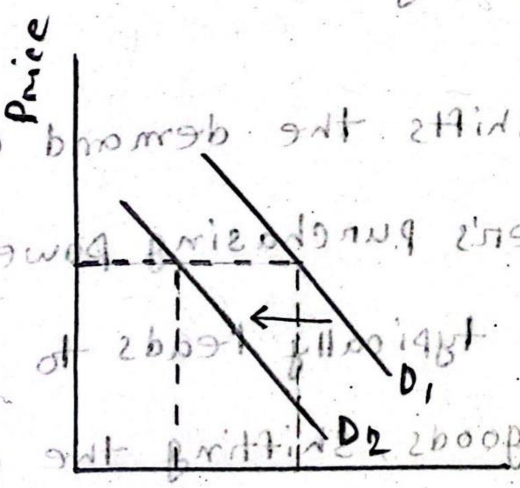
(iv) Number of ~~by~~ buyers

Income : Income shifts the demand curve by influencing consumer's purchasing power. An, increase in income typically leads to highter demand for normal goods, shifting the demand curve to the right.



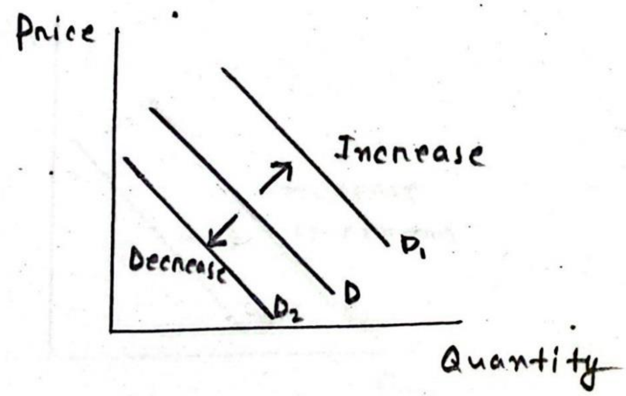
(Increase in income)

Price of related goods : If the fall in the price of one good increases the demand for another good or if the fall in the price of one good reduces demand for another good, both cases the demand curve will shift.



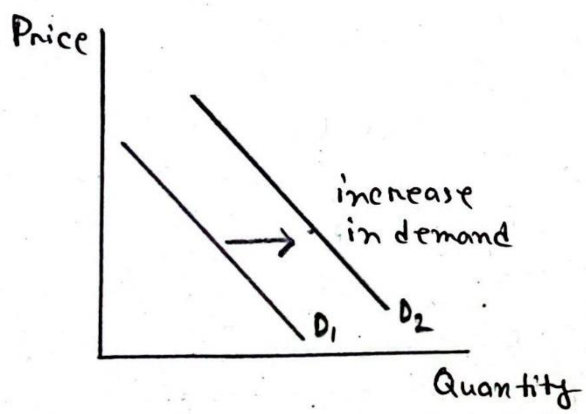
Effect on Demand Curve due to Decrease in Price of Substitute Goods

Tastes : Taste on customen attitudes can shift the demand curve based on changing penceptions of a pnoduct. If a good becomes mone popopulan, the demand cunve shifts nightwand. Convensely, if pnefenences shift away fnom a pnoduct, the demand cunve Shifts leftwand.

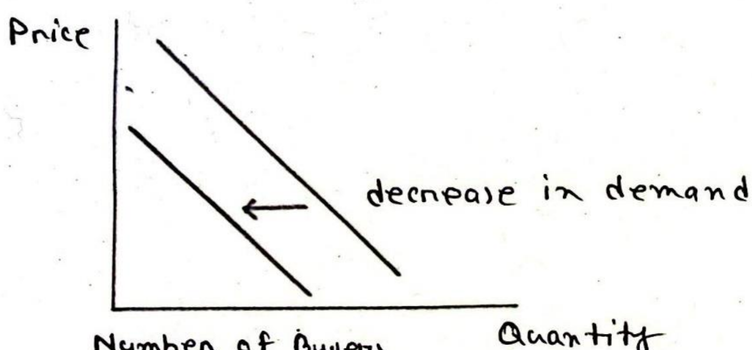


Demand Curve Shift vanying on consumens taste.

Number of Buyers: An increase in the number of buyers typically leads to a overall higher demand, rightward shift. Conversely a decrease in number of ~~by~~ buyers result in lower demand, leftward shift.



Number of Buyers increased



Number of Buyers decreased

Name : TRIDIB SARKAR
ID : 22-46444-1

Section: I

Ans. to the ques. no: 5

5.a) GDP: Gross Domestic Products, which tells us the nation's total income and the total expenditure on its output of goods and services.

GNP: GNP measures the total income earned by nationals. The Gross National Product is a measure of the total value of all goods and services produced by the residents of a country, including income earned abroad.

NNP: Net National Product is a microeconomic measure that represents the total value of all goods and services and produced by the residents of a country within a specific time period, minus the depreciation of capital assets.

NNP = GNP − Depreciation

National Income: National income measures how much everyone in the economy has earned.

National Income = NNP − Indirect Taxes

National income is the total monetary value of all goods and services produced by the residents of a country within a specific time period, typically measured annually.

Personal Income: Personal income is the total earnings received by individuals, households and non profit institutions serving households before the dedvction of personal income taxes.

Personal Income = National Income – corporate profits – social insurance contributions – Net interest + dividends + Governments transfers to individuals + Personal interest income.

Disposable Personal Income: Disposable personal income is the total amount of money available to individuals and households for spending and saving after personal income taxes have been deducted.

Disposable personal income = Personal Income – Personal taxes.

5.b) <u>Nominal interest rate</u>: The nominal interest rate is the stated, unadjusted rate of interest on a loan or investment, expressed as a percentage, without considering the impact of inflation or deflation.

<u>Real interest rate</u>: The real interest rate is the effective interest rate after accounting for changes in the purchasing power of currency due to inflation or deflation.

Given,

Nominal interest rate = 7%

Real interest rate = 5%

Inflation rate = ?

We know,

Real interest rate = Nominal interest rate − Inflation rate

⇒ Inflation rate = Nominal interest rate − Real interest rate

$= 7\% - 5\%$

$= 0.02$

∴ Inflation rate $= 2\%$

(Ans:)