



General Instructions:

- *The assignment should be the original work of the student her/himself.*
 - *Neat work is highly rewarded*
 - *Meeting submission deadline is part of the assignment evaluation criteria.*
1. Suppose that a seller decreases price for his/her good by 5 percent. Discuss how total revenue changes when:
 - A. $\epsilon_d=0.5$
 - B. $\epsilon_d=1$
 - C. $\epsilon_d=1.5$
 2. Suppose that a consumer with income of birr 90 wants to spend the whole income on good B and good A. Assume that the goods are consumed on a one-to-one basis and one good is worthless without the other. The price of good A and B are both 3 birr.
 - A. How many units of good A & B will the consumer buy?
 - B. If the price of good A increases to birr 6, how many he/she buy of each?
 - C. What type of preferences does consumption of the two goods represent? What is the shape of the indifference curve for this type of preference?
 3. The following data for a hypothetical country in millions of dollars for the year 2020
 - A. Calculate the gross domestic product of the country

Depreciation	200
Exports	150
Public transfer	200
Gross domestic private investment	300
Corporate income tax	100
Factor receipts from abroad	400
Government expenditure on goods and services	250
Interest income	800
Compensation of employees	2600
Net interest on government debt	50
Indirect business taxes	100
Factor payments to abroad	200
Imports	200
Proprietors income(profits)	700
Retained corporate profit	200
Personal consumption expenditure	4500
Personal taxes	100
Social security contribution	50
Rental income	600
Interest income	800



- I. Using the expenditure approach
 - II. Using the income approach
 - B. Calculate the gross national product of the country
 - C. Calculate the real GDP of the nation if the price index for the year is **111**
 - D. Calculate the nations growth rate if the real GDP for the year 2019 is **4000**
 - E. Calculate the rate the inflation rate of the economy if the consumers price index for 2019 is **100**
 - F. Find personal disposable income
4. Given the following short run production function schedule of a firm where we have only one variable input, (L), and one fixed input, land. Answer the following questions

Labor (L)	0	1	2	3	4	5	6	7	8
Total product(TP)	0	3	7	12	16	18	19	19	16

- A. Identify the three stages of production in table form and graphically
 - B. When the law of diminishing marginal returns does starts to operate?
 - C. At what stage of production should a rational producer produce? Why?
5. Suppose a perfectly competitive firm with total cost function given as:
- $$TC = 400 + 20Q - 2Q^2 + \frac{2}{3}Q^3.$$
- A. Find profit maximizing level of output and the maximum profit if the average revenue equals \$180.
 - B. Calculate the shutdown level of output and price
6. Explain briefly the concepts of unemployment, inflation, trade deficit, budget deficit and macroeconomic policy instruments.