

Study Programme	: Bachelor of Technology Honours in Engineering
Name of the Examination	: Final Examination
Course Code and Title	: AGM4307 Economics and Marketing for Engineers
Academic Year	: 2022/23
Date	: 24/02/2024
Time	: ~~14.00 to 17.00hrs~~ 13.30 - 16.30 hrs.
Duration	: 3 hours

SECTION II

Answer **any four (04)** Questions.

Answer for each question should commence from a new page.

You may spend **two (2) hours**.

- Write short notes on the following topics. *(5 marks each)*
 - Unemployment
 - Circular flow of economic activity
 - Philip's curve
 - The product life cycle
 - Monopoly market
- Define Gross Domestic Product (GDP) **(6 marks)**
 - Explain the expenditure approach to measuring GDP. **(6 marks)**
 - If consumption is Rs.500 billion, Investment is Rs.100 billion, Government expenditure is Rs.200 billion and Export is Rs.20 billion, and Import is Rs.70 billion, calculate the GDP. **(7 marks)**
 - Explain the limitations of GDP as a measure of economic well-being. **(6 marks)**
- Consider the market for steel in Sri Lanka. The demand and supply curves for steel are given by the following equations:

Quantity Demanded; $Q_d = 800,000 - 10P$

Quantity Supply; $Q_s = 200,000 + 20P$

Where P represents the price of steel (Rs/kg), and Q represents the quantity of steel bought and sold per month. Assume that all types of steels in the market are homogeneous.

- Calculate the equilibrium price and quantity that would prevail in the absence of any market interventions. **(5 marks)**
- Calculate the producer and consumer surplus at this equilibrium. Graphically show both. **(10 marks)**
- Calculate the amount of steel eventually available if the government imposes a minimum price of Rs.300 per kg. **(5 marks)**
- Illustrate graphically the new producer surplus and consumer surplus with a minimum price of Rs.300 per kg. **(5 marks)**

- 4.
- Graphically illustrate zero profit and shutdown price point and supply curve using cost curves? **(5 marks)**
 - Graphically illustrate a legal minimum imposed on the market price of a good. **(5 marks)**.
 - Using graphical illustrations describe how the burden of taxes falls more on the inelastic side (demand or supply) of the market. **(5 marks)**
 - Graphically illustrate how a subsidy given by the Government for producers causes inefficiency in the market. **(5 marks)**
 - Describe how a 'Pigouvian tax' can eliminate the deadweight loss caused by a negative externality. **(5 marks)**
5. Consider two neighbouring industrial zones, **Zone A** and **Zone B**, each specializing in the production of two industrial components: **steel beams** and **concrete blocks**. The following table outlines the production capacities and labor requirements for each component in both zones:

	Zone A	Zone B
Labor hours available per day	500	600
Amount of labor hours required to produce one unit of steel beam.	2	3
Amount of labor hours required to produce one unit of concrete block.	3	2

- Determine which industrial zone has the absolute advantage in producing steel beam and concrete blocks. Calculate the production levels of steel beams and concrete blocks by each zone if they specialize according to their absolute advantage. **(5 marks)**
- Compute the opportunity cost of producing one unit of steel beam and one unit of concrete block in each industrial zone. Identify the industrial zone with the comparative advantage in producing steel beams and concrete blocks. **(5 marks)**
- Assuming no trade between the industrial zones, allocate half of the available labor hours in each zone to produce each good. Calculate the production levels of steel beams and concrete blocks in both industrial zones under autarky. **(5 marks)**
- Suppose Zone A can produce 400 steel beams and 300 units of concrete blocks while Zone B can produce 500 steel beams and 400 units of concrete blocks. Calculate the total production of steel beams and concrete blocks in both zones under free trade. **(5 marks)**
- Compare the production levels and welfare implications of both industrial zones under free trade with those under autarky. Discuss how both industrial zones benefit from engaging in free trade compared to autarky. **(5 marks)**

6.
 - a. Explain the effect of banning automobile imports on the Sri Lankan economy. **(7 marks)**
 - b. Explain how fiscal policy initiatives such as infrastructure development projects contribute to long-term economic growth in Sri Lanka. **(8 marks)**
 - c. Explain how changes in interest rates impact borrowing, spending, and investment decisions in Sri Lanka. **(10 marks)**