



0421

The Open University of Sri Lanka
Faculty of Engineering Technology

Department of Agricultural and Plantation Engineering / Department of
Electrical and Computer Engineering

Study Programme : Bachelor of Software Engineering Honours
Name of the Examination : Final Examination
Course Code and Title : AGM 4367 Economics and Marketing for Engineers
Academic Year : 2024/25
Date : 16th February 2026
Time : 0930-1230h
Duration : 3 hours

INDEX NO:

.....

General instructions

1. Read all instructions carefully before answering the questions.
2. This question paper consists of Two (02) Sections.
3. You are allowed to use a scientific calculator.
4. Please do not remove the question paper from the examination hall.

Section I

- Consists of Ten (10) questions in Three (03) pages.
- Answer all questions.
- All questions carry equal marks.
- Write answers only in the space provided.

Section II

- Consists of Five (05) questions in Three (03) pages.
- Answer any Four (04) questions.
- All questions carry equal marks.
- Answer for each question should commence from a new page.

Section I

1. List four (04) types of resources available for producing goods and services.

- i.
- ii.
- iii.
- iv.

2. List four (04) characteristics of a monopolistic market.

- i.
- ii.
- iii.
- iv.

3. A. How do you categorize a commodity like a Benz car?

B. What would happen to the demand for Benz cars if the income level of a general Sri Lankan is increased?

- A.
- B.

4. How Gross National Product (GNP) differ from Gross Domestic Product (GDP)?

-
-
-
-

5. Name three (03) macroeconomic policies which can increase the growth of a country.

- i.
- ii.
- iii.

6. List down two (02) solutions which are currently practicing in private sector to overcome externalities.

- i.
- ii.

7. What do you understand by "Price Discrimination"?

-
-
-
-

8. What are the four (04) P's of marketing mix?

- i.
- ii.
- iii.
- iv.

9. Explain the difference between micro economics and macro economics.

.....

.....

.....

.....

10. "Poor countries are trapped into a vicious cycle of poverty". Schematically show the vicious cycle of poverty.

Section II**Question 01**

The Sri Lanka ICT Agency (ICTA) has observed a sharp increase in the price charged for basic software maintenance and technical support packages offered by local IT service firms to small and medium-sized enterprises (SMEs). Concerned that high prices may discourage SMEs from adopting digital solutions, the government is considering imposing a price ceiling on the monthly fee charged for a standard software maintenance package.

Market analysts estimate the demand and supply for these standard software maintenance packages as follows:

$$QD = 12,000 - P$$

$$QS = -4000 + P$$

Where, P= monthly service fee and Q= number of software maintenance packages. Assume that all service packages are identical in scope and quality.

- Calculate the equilibrium price and equilibrium quantity of software maintenance packages in the market. (4 marks)
- Calculate producer and consumer surplus at this equilibrium. (4 marks)
- Using a clearly labelled diagram, illustrate the market equilibrium, indicating both consumer surplus and producer surplus (4 marks)
- If the government imposes a price ceiling of Rs. 6,000 per month, determine whether there is a shortage or surplus in the market at the price ceiling and calculate the size of the shortage or surplus. (4 marks)
- Graphically illustrate the new producer surplus and consumer surplus with price ceiling. (4 marks)

Question 02

- Using macroeconomic knowledge, discuss the current macroeconomic issues impacted on the IT industry in Sri Lanka. (10 marks)
- Explain the difference between real and nominal GDP. (3 marks)
- In 2022, a software company developed and sold 5 licenses of a project management tool at Rs 50,000 per license. In 2025, due to increased demand and inflation in software services, the price of the same project management tool rises to Rs 60,000 per license and the company sells 6 licenses.

- I. What is the nominal GDP for 2025? (2 marks)
- II. What is the real GDP in 2025 measured in 2022 prices? (2 marks)
- III. What do you understand by GDP deflator? (2 marks)
- IV. Calculate the GDP deflator for 2025. (1 mark)

Question 03

The table below shows data for the production of good X for an individual firm operating in a perfectly competitive market.

Table Q3: Revenue and Cost Schedule

Quantity of Good X	Total Revenue	Total Cost
0	0	10
10	80	30
20	160	40
30	240	55
40	320	85
50	400	135
60	480	215
70	560	325
80	640	470

- a. Using the data provided, calculate the profit at each level of output. (3 marks)
- b. Calculate the Average Revenue (AR) at 20, 40 and 60 output levels. (3 marks)
- c. Calculate the Average Cost (AC) at 20, 40 and 60 output levels. (3 marks)
- d. Calculate the Marginal Revenue (MR) between successive output levels from 10 to 80 units. (2 marks)
- e. Calculate the Marginal Cost (MC) between successive output levels from 10 to 80 units. (2 marks)
- f. Identify the profit maximizing level of output and the maximum profit earned. (3 marks)

- 0421
- g. If the firm is currently producing 70 units, advise whether it should increase, decrease or maintain its output level. Justify your answer briefly. (4 marks)

Question 04

A dentist was charging Rs. 5000 for a standard cleaning job, and per month it used to generate total revenue equal to Rs. 500,000. She has increased the price of dental cleaning to Rs. 5500 since last month. As the result of few customers are now coming for dental clearing, but the total revenue is now Rs. 522,500. From this, what can we conclude about the elasticity of demand for such a dental service.

- a. Calculate Price Elasticity of Demanded. (8 marks)
- b. Why is price elasticity of demand negative sign always? (2 marks)
- c. "A tax can be charged by the Government on a seller or a consumer for producing or consuming a good" Explain using suitable graph. (5 marks)
- d. The government has permitted vehicle imports but with a significantly high import tax. Identify five possible impacts of this policy/decision on Sri Lanka's car market. (5 marks)

Question 05

Write short notes on any five (05) of the following topics. (20 marks)

- a. The product life cycle
- b. Economic impacts of Cyclone Ditwah
- c. Theory of absolute advantage
- d. Consumer price index and producer price index
- e. Role of governments in solving economic problems
- f. Growth accounting