



ZIMBABWE EZEKIEL GUTI UNIVERSITY

FACULTY OF BUSINESS, ECONOMICS, AND ACCOUNTING

DEPARTMENT OF BUSINESS ADMINISTRATION AND MANAGEMENT

EXAMINATION PAPER

COURSE CODE : CPS 213
COURSE TITLE : TRANSPORT ECONOMICS
DURATION : 3 Hours
LEVEL : 2.1

30 NOV 2022

INSTRUCTIONS TO CANDIDATES:

1. No cell phones are allowed in the examination venue.
2. Use of silent, non-programmable calculators is allowed
3. Answer **FOUR** questions, that is number **one (1)** and any other **three (3)**.
4. Begin each question on a new page.
5. The number of marks for each question or part question is shown in brackets []
6. Show all workings, where applicable.

Question 1

The escalating transport problem in Harare led to the re-introduction of rail transport for the working class. A research student has estimated its demand and got the following:

$$Q = 80 - 2.5P$$

where; Q is the quantity of seats and P is fare of a trip.

- i. If you were to remodel the demand for this product, state and explain any **five** factors you could have added in this model? [10]
- ii. How many seats can be sold at \$0.50 each? [5]
- iii. How much would the price have to be in order to sell 50 seats? [5]
- iv. Advise the drivers on the price that will result in no sales of seats. [5]

Question 2

Trucks moving from South Africa heading north have an option of either using the Beitbridge border post (the busiest in-land boarder in Southern Africa) or go via Botswana and utilise the newly opened Kazungula Boarder post. Drivers have been complaining about the delays at Beitbridge, further worsened by the potholes and frustrating road blocks in Zimbabwean roads though it is thought to be the shorter route.

- a. Explain the concept of derived 'demand for transport'. [5]
- b. Is Kazungula boarder post strategically positioned? [5]
- c. Assess the rationality of using Kazungula border post instead of Beitbridge boarder post. [15]

Question 3

The supply of transport heavily depends on costs. Consider a player in the rail transport who has hired you to classify his costs. Identify and explain the different types of costs which may be incurred in the supply of rail transport. [25]

Question 4

Describe the assumptions of perfect competition and explain how perfect competition contributes to allocative efficiency. [25]

Question 5

Consider two firms in the transport industry. Firms A and B each produce 80 units of pollution. The government wants to reduce pollution levels. The marginal costs associated with pollution reduction are:

$$MC_A = 50 + 3Q_A \text{ for firm A}$$

$$MC_B = 20 + 6Q_B \text{ for firm B}$$

where Q_A and Q_B are the quantities of pollution reduced by each firm.

Society's marginal benefit from pollution reduction is given by

$$MB = 590 - 3Q_T \text{ where } Q_T \text{ is the total reduction in pollution.}$$

- a) What is the socially optimal level of each firm's pollution reduction? [5]
- b) How much total pollution is there in the social optimum? [5]
- c) Explain why it is inefficient to give each firm an equal number of pollution permits (if they are not allowed to trade them). [7]
- d) Explain how the social optimum can be achieved if firms are given equal numbers of pollution permits but are allowed to trade them. [8]

--- The End ---

---Asanteni---

12/26 AM