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Universiti Tun Hussein Onn Malaysia

UNIVERSITI TUN HUSSEIN ONN MALAYSIA

**FINAL EXAMINATION
SEMESTER II
SESSION 2013/2014**

COURSE NAME : TRANSPORTATION SYSTEM
AND PLANNING
COURSE CODE : BFT 40103
PROGRAMME : 4 BFF
EXAMINATION DATE : JUNE 2014
DURATION : 3 HOURS
INSTRUCTION : ANSWER **FOUR (4)** QUESTIONS
FROM **FIVE (5)** QUESTIONS
PROVIDED

THIS QUESTION PAPER CONSISTS OF **FOUR (4)** PAGES

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- Q1.** (a) Explain briefly the terminology of transportation modes? (5 marks)
- (b) Determine and explain the contributory factors to the development to the growth of a transportation system. (6 marks)
- (c) Batu Pahat, Ayer Hitam and Kluang town municipalities planned to enhance its public transportation system.
- (i) Explain briefly the processes to identify the appropriate transportation system (6 marks)
- (ii) Determine the expected impacts upon completion of the public transportation system to the three (3) townships? (8 marks)
- Q2.** (a) Determine the requirements to establish an effective and efficient transportation system in urban and rural areas. (6 marks)
- (b) Intelligent transportation system (ITS) is an important agenda for many city planners. Explain the characteristics of ITS with appropriate examples. ((6 marks)
- (c) Traffic impact assessment (TIA) is important to ensure that any development projects in a township does not create mobility problems upon completion.
- (i) Describe the elements taken into account during the preparation of a TIA report. (6 marks)
- (ii) Using appropriate examples, explain the key analytical elements which are conducted and presented in a TIA report.. (7 marks)
- Q3.** (a) Determine and explain five (5) issues in transportation management. (6 marks)
- (b) Explain with examples the four (4) elements which are the main backbone of establishing a transportation system. (5 marks)

- (c) Based on your general observations, how do you plan to encourage the public to use the existing public transportation?
(5 marks)
 - (d) Describe the difference between transportation system management and transportation management system which are deemed suitable to solve particular transportation problems in a city or town center.
(9 marks)
- Q4**
- (a) Explain briefly the economic importance of transportation.
(5 marks)
 - (b) In ensuring the viability of a transportation system, the economics of road investment for land transportation is very important. Explain in detail the seven (7) main frequently asked questions in order to ensure the investment is economical and sustainable.
(10 marks)
 - (c) There are many evaluation procedures to ensure certain transportation projects were being rationally justified. Determine and select the best option for the followings using Goals And Objectives Achievement Matrices method as shown in Table 4.1. Explain your selection of the alternative.
(10 marks)

Table 4.1: ALTERNATIVES PARAMETERS

EVALUATION MATRIX	POSSIBLE EFFECTIVENESS SCORE	Score for Plan A	Score for Plan B	Score for Plan C
Benefit-Cost ratio	40	35	28	30
Persons Relocated	20	10	20	7
Transit Load Factor	20	10	18	4
Core Accessibility	10	3	6	10
Low-income Transit Availability	10	4	9	7

- Q5**
- (a) Explain briefly the correlations and impact of trips generation and trips distribution to traffic growth and mobility.
(5 marks)

- (b) Identify and describe five (5) intelligent transportation applications and gadgets that could assist the efficiency and effectiveness of traffic flow.
(5 marks)
- (a) Upon completion of the establishment of a transportation system, the management components are crucial in order to ensure smooth and sustainability of the system.
- (i) What are the issues in transportation management?
(7 marks)
- (ii) Explain the contributory factors towards achieving a good and effective transportation management.
(8 marks)

- END OF QUESTION -