



UNIVERSITI TUN HUSSEIN ONN MALAYSIA

FINAL EXAMINATION
SEMESTER II
SESSION 2023/2024

- COURSE NAME : TRAFFIC AND TRANSPORTATION
MANAGEMENT
- COURSE CODE : BPF 31803
- PROGRAMME CODE : BPC
- EXAMINATION DATE : JULY 2024
- DURATION : 3 HOURS
- INSTRUCTIONS :
1. ANSWER ALL QUESTIONS
 2. THIS FINAL EXAMINATION IS
CONDUCTED VIA
 Open book
 Closed book
 3. STUDENTS ARE **PROHIBITED** TO
CONSULT THEIR OWN MATERIAL
OR ANY EXTERNAL RESOURCES
DURING THE EXAMINATION
CONDUCTED VIA CLOSED BOOK

THIS QUESTION PAPER CONSISTS OF FIVE (5) PAGES

Q1 Cheras fire incident highlights risks of haphazard parking in the city.

KUALA LUMPUR: The government must review the current housing policy and guidelines for parking space allocation to ensure enough spaces and avoid illegally parked cars obstructing emergency calls, experts say. This comes after a report of parked vehicles belonging to residents, on the roadside near the Sri Sabah flats, here in Cheras, had hindered the fire and rescue team from extinguishing the fire at Block 70 yesterday.

Universiti Malaya urban and regional planning expert Dr Noor Hashimah Hashim Lim said the universal housing guideline provided one parking space per housing unit. However, she said, the space provided was considered insufficient due to the residents owning multiple vehicles per household, leaving them no choice but to park illegally.

"While our universal housing guideline provides for one parking space per housing unit, in reality, every household owns at least two cars per family and sometimes more. The National Affordable Housing Policy also allocates for one parking space per housing unit of less than 1000 square feet (sq ft). Only housing units of more than 1000 sq ft can be allocated with two parking spaces. But the majority of flats in our country are less than 1000 sqft. Hence, the residents have no choice but to double park," she told the New Straits Times.

Noor Hashimah said much-needed improvements in transport infrastructures could also help the government's effort to achieve sustainability goals by encouraging less usage of private vehicles.

Meanwhile, University Putra Malaysia's Urban and Regional Planning, Security, and Community Development expert Dr Mohammad Mujaheed Hassan said the guideline must take into consideration the growing numbers of residents and households.

"Nowadays, it's common for each housing unit to need at least two designated parking spots. This means that when people live in apartments or houses, they usually expect to have space for two cars. This is because most families have more than one vehicle or need extra parking for visitors. Having enough parking spaces helps prevent problems like cars blocking emergency access or overcrowded streets, which can be a safety hazard. So, I believe it's important to follow or even exceed this standard to ensure everyone has enough space to park their vehicles safely. But it must be cleared that Flat Sri Sabah, Cheras is considered a low-cost flat which does not come with the requirement of one to one unit to designated car parks," he said.

The Kuala Lumpur City Hall (DBKL) should conduct feasibility studies to identify suitable locations for multistorey car parks and assess the parking demand to ensure adequate provision for residents. The obstruction caused by parked vehicles near the flats underscores the importance of ensuring adequate access to emergency services in residential areas.

He added that DBKL should collaborate with relevant agencies to enforce parking regulations effectively.

(Source: New Straits Times, Feb 12, 2024)

- (a) Illustrate **TWO (2)** types of parking that need to be taken to address the problem as a transportation planning officer at a government organization.
(15 marks)
- (b) Discuss **FIVE (5)** planning principles which are identified as the main core to planning and preparing the parking space.
(15 marks)
- (c) Interpret **TWO (2)** legal provisions, standards, and guidelines that need to be considered in the planning and development of parking facilities.
(10 marks)

Q2 Road traffic systems consist of road users (drivers and pedestrians), vehicles, and road networks that interact with one another. It is important to study each of these elements for the planning, design, and analysis of an efficient and safe road traffic system. Road users consist of drivers, passengers, motorcyclists, cyclists, pillions and pedestrians.

- (a) Justify **THREE (3)** factors that influence the characteristics and behavior of a road users.
(15 marks)
- (b) Describe the following traffic parameters.
- (i) Traffic Flow or Volume (q)
 - (ii) Speed (u)
 - (iii) Density (D)
 - (iv) Level of Service (LOS)
- (10 marks)

Q3 **Traffic woes: Effective management plans near construction sites needed – experts.**

KUALA LUMPUR: Traffic management plans, especially those located near construction areas, need to be carried out more comprehensively and effectively to immediately reduce traffic congestion in the capital.

Universiti Teknologi Mara (UiTM) Civil Engineering lecturer, Associate Prof Dr Masria Mustafa, said the construction projects carried out simultaneously, due to delays caused by the implementation of the Movement Control Order (MCO) for more than two years, have resulted in haphazard traffic control.

Therefore, Masria, who is also a lecturer in Traffic and Transportation Systems, proposed that the Kuala Lumpur City Hall (DBKL) coordinate the traffic system more

closely, including aspects of road closures implemented in different construction areas, as well as monitoring if there are non-compliances that could lead to revocation of the original approval.

"Every agency involved in construction must be responsible; there must be communication between them. For example, large construction structures to be brought in, of course, need road planning involved, and also if they require road closures.

"Similar to the current situation, there is no coordination, so the parties involved such as developers and different contractors do not know about traffic control in other areas, so the traffic will be uncontrolled and there will be many 'bottlenecks' that cause congestion," she told Bernama.

(Source: New Straits Times, July 9, 2022)

(a) Outline **FOUR (4)** factors affecting the preparation of a Traffic Management Plan (TMP) in the construction workplace. (10 marks)

(b) "A Traffic Management Plan (TMP) is a site-specific plan that covers design, implementation, maintenance and removal of temporary traffic management measures while work or activity is carried out in the road corridor. Lately, JKR received many feedbacks from the public regarding poor performance of the implementation of TMP at construction sites. This inevitably cause traffic congestion and may lead to crashes involving road users. This will lead to an increase exposure of risk involving litigation claims from the crash victims. Hence, the purpose of Traffic Management during construction is not only to provide mobility but also to ensure safety among road users".

(Jabatan Kerja Raya, 2017)

Propose with the aid of sketches, the appropriate Traffic Management Plan (TMP) during construction for the work zone lane closure. The posted speed limit of the road is 60 km/h.

The TMP needs to include:

- (i) Traffic Flow
- (ii) Arrow Flasher
- (iii) Cone
- (iv) Barrier
- (v) Traffic Sign
- (vi) Close area
- (vii) Work zone
- (viii) Flagman

(15 marks)

- (c) Outline **FIVE (5)** principles that need to be implemented to ensure an effective Traffic Management Plan (TMP) in the work zone. (10 marks)

- END OF QUESTIONS -