



First Semester Examination  
2017/2018 Academic Session

January 2018

**EAP584 – Environment Impact Assessment**

Duration : 2 hours

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Please check that this examination paper consists of FOUR (4) pages of printed material before answering the question.

**Instructions** : This paper contains **FIVE (5)** questions. Answer **FOUR (4)** questions.

All questions must be answered in English.

Each question **MUST BE** answered on a new page.

- 1 (a) Discuss general overview of scoping in the Environmental Impact Assessment Procedures 2016 for Malaysia.
- [10 marks]
- (b) Explain Environmental Component and Characteristics normally included in a Matrix. Please illustrate an example of a Matrix.
- [15 marks]
- 2 (a) Explain the importance of impact management in development project
- [5 marks]
- (b) A proper and thorough planning can only be carried out effectively if the potential impacts arising from the project activities have been identified. Propose mitigation measures from possible activities involve in construction of hotel covering an area of 30 hectare in hilly area of Bukit Mertajam, Penang. Only minor earthwork involves in this project as the existing landform needs to be maintained to protect the aesthetic value and attractiveness of the area as a tourist spot.
- [20 marks]
- 3 (a) Development area of 1000 ha is planned for institutional development. The area is hilly and with 50% of the area consists of 25% slope. The area is covered by secondary forest and bushes. There are no sensitive ecological areas for preservation in the proposed development area. Select and discuss **THREE (3)** principles most desirable for erosion and sediment control that should be considered in the planning.
- [15 marks]
- (b) Commercial buildings are planned on 350 ha development area. The area is flat where the level changes less than 0.50 m and covered with sparse vegetations. Select and discuss the most desirable **THREE (3)** erosion and sedimentation control devices for train of treatment during earthwork phase of the project.
- [10 marks]

- 4 (a) Environment Impact Assessment (EIA) is a procedure to identify the effects of a proposed development and to assess their impacts and levels of significance to the surrounding environment of a project site. Traffic impact assessment (TIA) is an approach used to evaluate the potential impacts of any new development on transportation and traffic systems in the surrounding area of a proposed development. Therefore, traffic impact assessment is an essential issue in EIA and recommendations from TIA will be incorporated in the EIA report. Based on the EIA reporting requirements, discuss the scope of work, factors and importance of assessing traffic impact in terms of environment impact assessment.

[15 marks]

- (b) Road accidents is a serious issue in Malaysia. Death rate due to road accidents has increased from 2.55 person for every 10,000 registered vehicles in 2015 to 2.59 in 2016. Therefore, road risk assessment is an approach to assess the hazards associated to driving on a road. Discuss the risk of traffic accidents and the effectiveness of road safety programmes implemented in Malaysia.

[10 marks]

- 5 (a) The landscape and visual impact assessment (LVIA) identifies systematically their potential impacts associated with the development by estimating their magnitude and assessing their significance in a logical well-structured fashion. Describe the common methodology applied in LVIA studies.

[6 marks]

- (b) There are two major data layers in GIS namely vector and raster, where spatial and attribute information can be connected.

- (i) Distinguish the differences with regards to their application in landscape visualization.
- (ii) Explain **THREE (3)** advantages of landscape data visualization using GIS.

[9 marks]

- (c) Remote sensing techniques are considered as an important source of information in Environmental Impact Assessment (EIA) due to its temporal and spatial data, and its ability to have a synoptic view of a large area.

Discuss how would you use remote sensing for **ONE (1)** of the following:

- (i) Evaluation of urban development
- (ii) Assessment of changes in land use/cover
- (iii) Assessment in mining areas

[10 marks]

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