



UNIVERSITI TUN HUSSEIN ONN MALAYSIA

**FINAL EXAMINATION
SEMESTER II
SESSION 2016/2017**

COURSE NAME : NATURAL AND BUILT HERITAGE
COURSE CODE : BWJ 31703
PROGRAMME CODE : BWW
EXAMINATION DATE : JUNE 2017
DURATION : 3 HOURS
INSTRUCTIONS : **SECTION A:**
ANSWER ALL QUESTIONS
SECTION B:
ANSWER ONE (1) QUESTION ONLY

THIS QUESTION PAPER CONSISTS OF FIVE (5) PAGES

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SECTION A

- Q1** (a) Climate change associated with global warming will therefore influence the conservation conditions for cultural heritage buildings and other cultural heritage sites in a built environment. Explain in detail how biological, physical and chemical decomposition processes can be expected to be affected in a built environment. (10 marks)
- (b) In addition to the gradual changes that occur over long periods, climate change will also mean more extreme weather events. This could lead to acute damage to buildings and structures of cultural heritage value. Outline **FIVE (5)** measures and analyze what needs to be done to the building structures to address the impacts of climate change. (15 marks)
- Q2** (a) Traditionally, concrete is one of the most commonly used building materials in Malaysia. Research has proven that concrete with cement being its core material, is highly dependent on earth natural resources. This eventually impacted the environment. Currently, the development of green concrete utilizing waste material as replacement for cement and natural aggregates has increased over the past decade.
- (i) Compare the differences between normal concrete and green concrete. (3 marks)
- (ii) Compare the benefits of producing green concrete made from agricultural and construction waste. (5 marks)
- (iii) It has been observed that the strength and properties of green concrete is influenced by the amount of agricultural and construction waste used. Analyze this statement. (5 marks)
- (b) List down **FIVE (5)** different types of construction systems. (5 marks)
- (c) Rehabilitation is an important element for the sustainability and longevity of existing buildings. The current method of rehabilitating an existing building is the application and external wrapping of Carbon Fibre Reinforced Polymer (CFRP) laminates to the structural component of these buildings.
- (i) Discuss the properties of CFRP and its comparison with other materials. (2 marks)
- (ii) A damage beam is shown in **FIGURE Q2(c)(ii)**, analyze the **TWO (2)** types of damages that occur. (2 marks)



- (iii) **FIGURE Q2(c)(iii)** shows a damage beam repaired by externally wrapping the CFRP laminates with an epoxy resin, investigate the possible outcome of the beam.

(3 marks)

- Q3** (a) Define what is ethnic enclave?

(2 marks)

- (b) The physical attributes of an ethnic enclave plays a significant role in maintaining the associations between immigrant and their place of origin. Demonstrate the characteristics of physical attributes of an ethnic enclave below.

- (i) Location

(2 marks)

- (ii) Architecture

(2 marks)

- (c) **Figure Q3(c)** shows the Cheng Hoon Teng Temple, Malaysia's oldest functioning temple located in Malacca. It is built in 1645 and has an influence of Straits Eclectic architectural style. Classify the **THREE (3)** architectural elements in this temple that represent Straits Eclectic architectural style.

(6 marks)

- (d) Demonstrate **TWO (2)** implications of direct imitation and mimicry of foreign architectural style to the local society and building environment?

(5 marks)

- (e) The Local Government of Batu Pahat invites architectural firms to submit a design proposal to build a local administrative building in Batu Pahat. The design brief suggests that the proposal must incorporate the local identity of Batu Pahat. As an appointed consultant, propose **FOUR (4)** strategies for a more inclusive approach in order to incorporate and preserve the local identity of Batu Pahat in the project.

(8 marks)

SECTION B

- Q4** (a) Cultural heritage tourism is important for various reasons; it has a positive economic and social impact, it establishes and reinforces identity, it helps preserve the cultural heritage, with culture as an instrument it facilitates harmony and understanding among people, it supports culture and helps renew tourism

- (i) Define 'Cultural Heritage Tourism'.

(2 marks)

- (ii) Classify the types of Cultural Heritage Tourism and give example when necessary. (3 marks)
- (iii) Analyze the issues and challenges that **THREE (3)** main bodies involved in cultural heritage tourism have to face. (10 marks)
- (b) Museum management is a very broad theme that takes into account all aspects concerned in the management of a museum. This includes curation, collection management, public education, exhibitions, and technology, to name a few. Analyze the flow of process in the inter-related elements of collection management. (10 marks)
- Q5** (a) The deliberate act of keeping cultural heritage from the present for the future is known as preservation (American English) or conservation.
- (i) Define 'Cultural Heritage'. (2 marks)
- (ii) Classify the types of Cultural Heritage and give example when necessary. (3 marks)
- (iii) Relate the positive and negative effects of Cultural Heritage Tourism. (10 marks)
- (b) Museum is an institution that cares for (conserves) collections of artifacts and other objects of artistic, cultural, historical, or scientific importance. Some public museums make them available for public viewing through exhibits that may be permanent or temporary. List **FOUR (4)** agents of deterioration of collections and analyze the risks of these agents in terms of its form of loss or damage, and the vulnerability of collections. (10 marks)

– END OF QUESTIONS –



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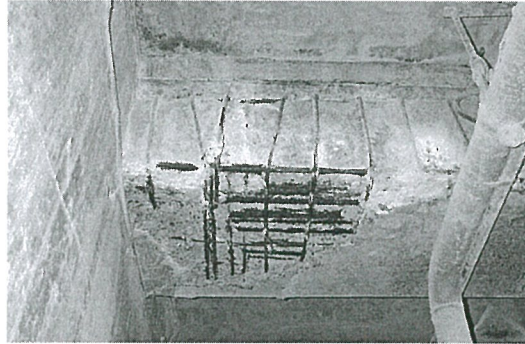


Figure Q2(c)(ii)



Figure Q2(c)(iii)

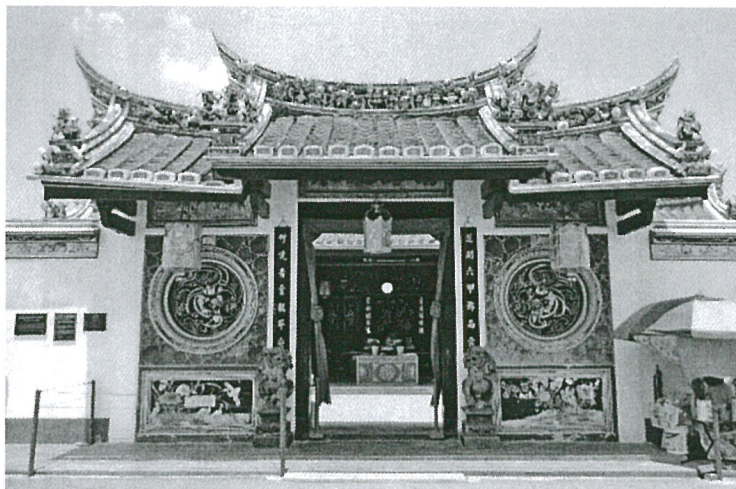


Figure Q3(c)

