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UTHM

Universiti Tun Hussein Onn Malaysia

UNIVERSITI TUN HUSSEIN ONN MALAYSIA

**FINAL EXAMINATION
SEMESTER I
SESSION 2021/2022**

COURSE NAME : SUSTAINABLE BUILT ENVIRONMENT

COURSE CODE : BWJ 32202

PROGRAMME CODE : BWW

EXAMINATION DATE : JANUARY/FEBRUARY 2022

DURATION : 3 HOURS

INSTRUCTION :

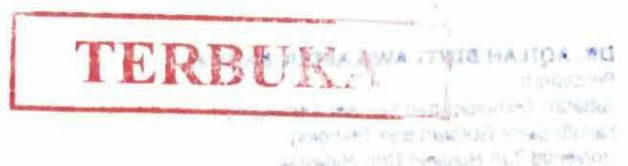
1. ANSWER ALL QUESTIONS.
2. THIS FINAL EXAMINATION IS A TAKE HOME ASSESSMENT AND CONDUCTED VIA OPEN BOOK

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

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- Q1**
- (a) Give an example of a generalist species that can thrive in an urban environment. (2 marks)
 - (b) Outline **TWO (2)** reasons why the species in **Q1 (a)** can adapt and cohabitate with humans better than a specialist species. (10 marks)
 - (c) Elaborate **TWO (2)** scenarios where specialist species will be negatively affected by unsustainable urban development. (4 marks)
 - (d) Explain **TWO (2)** ways on how human contribute to introducing invasive species in an urban setting. (4 marks)
- Q2** You are building your dream house. You have an unlimited budget and access to initial resources.
- (a) Pick a location for your dream house. It can be anywhere in the world. (2 marks)
 - (b) Considering the environmental consequences, what kind of building materials will you use to build your house? Explain your choice of materials for construction. (2 marks)
 - (c) Based on your answer in **Q2 (a) and (b)**, elaborate the design of your dream house that implements different elements of sustainability and passive design including human comfort levels, energy generation, water consumption, and waste management. (16 marks)
- Q3** *“Global warming and climate change is causing a rise in sea levels. This forces people living in low lying areas such as Bangladesh, Mekong Delta in Vietnam and Nile Delta in Egypt to abandon their homes. For the people living in these areas, the question is how quickly the sea is rising and what can they do about it.”*
- (a) As a science officer attached to the Malaysian Ministry of Foreign Affairs, you are required to brief the ministry official on the topic of rising tide. Based on the excerpt above and your own reading on the subject, write a brief on the topic of rising tide in less than 200 words. (10 marks)
 - (b) The United Nations hosted the COP26 summit on climate change in November 2021. During the summit, nearly 200 countries committed to the Glasgow Climate Pact. At



the end of the summit, Greta Thunberg addressed the summit in a tweet in **Figure Q3 (b)**.

What do you understand from Greta Thunberg's statement? Do you think COP26 is a success? Justify your answer.

(10 marks)

Q4 (a) Differentiate between 'Regular/Conventional' sources of energy and 'Green/Renewable' sources of energy. Give **TWO (2)** examples for each source.

(10 marks)

(b) The use of renewable energy is evolving at a rapid pace while conventional energy is being used less and less. Outline **FIVE (5)** characteristics of renewable energy compared to conventional energy that would explain the current surge in interest and demand for renewable energy sources.

(10 marks)

Q5 Many buildings in Malaysia, including UTHM main campus buildings are installed with rooftop photovoltaic modules. Elaborate **FIVE (5)** reasons why installing rooftop photovoltaic modules is a good development plan for green energy initiatives.

(20 marks)

– END OF QUESTIONS –

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Pinned Tweet

 **Greta Thunberg** @GretaThunberg · Nov 14
The #COP26 is over. Here's a brief summary: Blah, blah, blah.

But the real work continues outside these halls. And we will never give up, ever.

 **Greta Thunberg** @GretaThunberg · Nov 7
Unless we achieve immediate, drastic, unprecedented, annual emission cuts at the source then that means we're failing when it comes to this climate crisis.
"Small steps in the right direction", "making some progress" or "winning slowly" equals losing.
#COP26 #UprootTheSystem

Figure Q3(b)

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SCHOOL OF DISTANCE EDUCATION
DEPARTMENT OF ENVIRONMENTAL AND WATER RESOURCES ENGINEERING