



UNIVERSITI TUN HUSSEIN ONN MALAYSIA

**FINAL EXAMINATION
(TAKE HOME)
SEMESTER I
SESSION 2020/2021**

COURSE NAME : PRINCIPLES OF BIODIVERSITY
AND CONSERVATION

COURSE CODE : BWJ 10102

PROGRAMME CODE : BWW

EXAMINATION DATE : JANUARY / FEBRUARY 2021

DURATION : 2 HOURS 30 MINUTES

INSTRUCTION : ANSWER ALL QUESTIONS
OPEN BOOK EXAMINATION

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

- Q1**
- (a) List down **THREE (3)** reasons why biodiversity is important for human survival. (3 marks)
- (b) Referring to **Figure Q1(b)**, there are differences between Site A and Site B in terms of people's overall perception about biodiversity and conservation. List down **THREE (3)** of these differences and explain each one clearly. (12 marks)
- (c) The distribution of biomes worldwide is highly influenced by biotic and abiotic factors.
- (i) Identify **TWO (2)** abiotic factors that are critical to the formation of the world's biomes. (2 marks)
- (ii) Throughout these biomes, biodiversity hotspots are identified. Explain **FOUR (4)** reasons why Malaysian ecosystems are considered as biodiversity hotspots. (8 marks)
- Q2**
- (a) The diversity of the species we see in the world today is a product of long process of evolution. Describe the **TWO (2)** processes of species evolution through natural selection that can happen in a given ecosystem. Give an appropriate example for each process. (10 marks)
- (b) Referring to **Figure Q1(b)**,
- (i) Identify **ONE (1)** related species that can be found in Site B and Site C. Note that related species refer to species that are relatives to each other; not of that exact same species. (2 marks)
- (ii) Analyze the possible speciation process which resulted to **Q2(b)(i)**. Explain your answer by elaborating on the possible gene flow (or the lack of it) that had occurred in this process. (8 marks)
- (c) Ecological imbalance is associated with events or actions that has brought negative impacts to an ecosystem. Give **ONE (1)** situation and explain clearly, when an ecological imbalance brings positive impact to an ecosystem. (5 marks)

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- Q3** (a) Worldwide, biodiversity is under threat. List down **THREE (3)** threats to biodiversity that are directly caused by humans or human activities. Explain each threat clearly. (15 marks)
- (b) The pattern of species diversity varies from ecosystem to ecosystem, from countries to countries. Analyze how biodiversity can be assessed quantitatively, given the described scenario. (10 marks)
- Q4** Biodiversity loss should be of everyone's concern, not just of the government. After all, every human being depends on it for survival. However, not everyone understands his/her individual role in biodiversity conservation. To overcome this issue, the Convention on Biological Diversity (CBD) has launched the Communication, Education and Public Awareness (CEPA) programme.
- (a) Demonstrate the initiatives that Malaysia, as a signatory to the CBD is undertaking to ensure that the Malaysian public understands biodiversity and conservation. (10 marks)
- (b) As a Biodiversity and Conservation student, one of your projects is to implement CEPA in SMK Sultan Alauddin Rlayat Shah. Outline **FIVE (5)** methods that you think are effective in educating middle school students in understanding the importance of biodiversity and its conservation. Explain each of your method clearly. (15 marks)

- END OF QUESTIONS -

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Figure Q1(b)

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