

# 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

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**EXAMINATION DATE** 

JANUARY / FEBRUARY 2021

**DURATION** 

2 HOURS 30 MINUTES

INSTRUCTION

ANSWER ALL QUESTIONS

**OPEN BOOK EXAMINATION** 

**TERBUKA** 

THIS QUESTION PAPER CONSISTS OF FOUR (4) PAGES

CONFIDENTIAL

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- 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)

- Piodiversity 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 Riayat 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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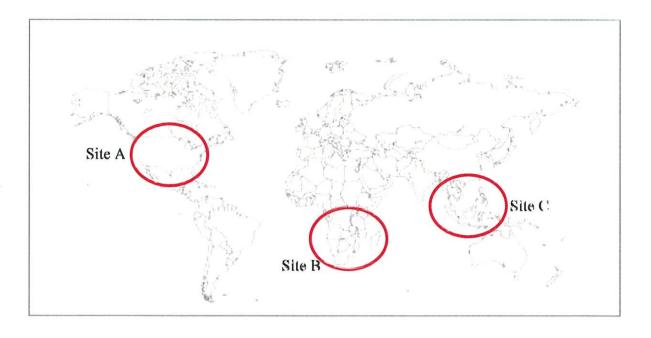


Figure Q1(b)

