UTHM
Universiti Tun Hussein Onn Malaysia

# UNIVERSITI TUN HUSSEIN ONN MALAYSIA

## FINAL EXAMINATION
## SEMESTER II
## SESSION 2022/2023

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|---|---|---|
| COURSE NAME | : | INTRODUCTION TO CONSERVATION BIOLOGY |
| COURSE CODE | : | BWJ 10203 |
| PROGRAMME CODE | : | BWW |
| EXAMINATION DATE | : | JULY/AUGUST 2023 |
| DURATION | : | 3 HOURS |
| INSTRUCTION | : | 1. ANSWER ALL QUESTIONS<br>2. THIS FINAL EXAMINATION IS CONDUCTED VIA<br>☐ Open book<br>☒ Closed book<br>3. STUDENTS ARE **PROHIBITED** TO CONSULT THEIR OWN MATERIAL OR ANY EXTERNAL RESOURCES DURING THE EXAMINATION CONDUCTED VIA CLOSED BOOK |

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

**Q1** (a) State the definition of conservation.

(4 marks)

(b) Explain the **THREE (3)** missions of conservation of biodiversity.

(6 marks)

(c) State the **SIX (6)** values of biodiversity.

(6 marks)

(d) Pick any **TWO (2)** values from **Q1(c)** and demonstrate a scenario for each value that displays the importance of biodiversity.

(4 marks)

**Q2** (a) Classify each organism listed below based on their phylum.

- Snail
- Leech
- Toad
- Sea star
- Roundworms
- Flatworm
- Coral
- Sea sponge

(8 marks)

(b) (i) Demonstrate **TWO (2)** importance of animals from the class Porifera for either humans or the ecosystem.

(4 marks)

(ii) Based on your answer in **Q2(b)(i),** explain **ONE (1)** threat that the animals in this class may face.

(6 marks)

(c) State the name of the book written by Rachel Carson in 1962 that initiated discussion on species conservation.

(2 marks)

**Q3** (a) (i) Explain **TWO (2)** reasons why species such as *Hopea subalata* or *Betta persephone* can only be found in Peninsular Malaysia and nowhere else in the world.

(7 marks)

(ii) Give **TWO (2)** examples of species that may face the same scenario as **Q3(a)(i).** Name their locality as well.

(4 marks)

(b) Explain the **THREE (3)** principles of conservation.

(9 marks)

**Q4** (a) Imagine you are given the opportunity to execute a conservation project. Outline the three basic questions that you would need to ask prior to the execution.

(6 marks)

(b) Explain what is meant by enhanced greenhouse effect and its consequences.

(6 marks)

(c) You are working as a scientist in Forest Research Institute of Malaysia (FRIM). You are looking to conserve and rehabilitate a threatened species of tree. Explain **FOUR (4)** parameters that you need to observe in the population before making the final decision.

(8 marks)

**Q5** (a) Explain the concept of genetic diversity, species diversity and ecosystem diversity.

(9 marks)

(b) Discuss the consequences of the scenario in **Figure Q5.1** on the genetic diversity of a species.

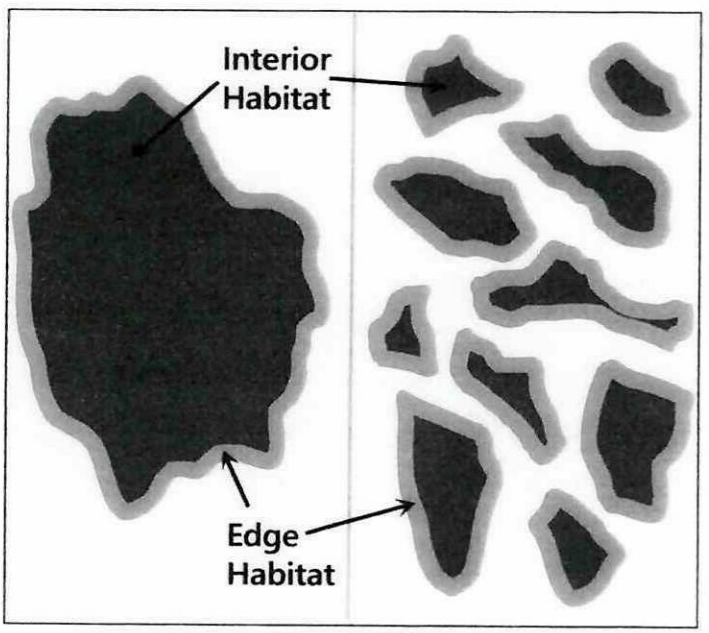


**Figure Q5.1**

(5 marks)

(c) Demonstrate **THREE (3)** responsibilities of a conservation biologist working with the Department of Wildlife and National Parks focusing on rehabilitation of elephants.
(6 marks)

**– END OF QUESTIONS –**