Universiti Tun Hussein Onn Malaysia

UNIVERSITI TUN HUSSEIN ONN MALAYSIA

FINAL EXAMINATION
SEMESTER I
SESSION 2018/2019

COURSE NAME	:	PRINCIPLES OF BIODIVERSITY AND CONSERVATION
COURSE CODE	:	BWJ 10102
PROGRAMME CODE	:	BWW
EXAMINATION DATE	:	DECEMBER 2018 / JANUARY 2019
DURATION	:	2 HOURS
INSTRUCTION	:	ANSWER **ALL** QUESTIONS

THIS QUESTION PAPER CONSISTS OF **THREE (3)** PAGES

Q1 (a) Give **FIVE (5)** examples of ecosystem diversity.

(5 marks)

(b) Define genetic diversity and explain how is it important to conservation.

(5 marks)

(c) The distribution of species worldwide is highly infuenced by its geographical location. Differentiate the pattern of distribution of species between the following.

(i) Tundra and Boreal

(ii) Tropical savanna and Tropical dry forest

(10 marks)

Q2 (a) Explain the following.

(i) Food web

(ii) Key mutualist

(iii) Ecological niche

(iv) First trophic level

(v) Allogenous engineer

(10 marks)

(b) Lowland tropical rainforest is an ecosystem that supports thousands of species in a relatively small area. Illustrate how co-existence of thousands of species can be possible in a lowland tropical rainforest like that of Taman Negara Johor Endau-Rompin.

(10 marks)

Q3 (a) Explain how the following are assessed.

(i) Species richness

(ii) Species evenness

(iii) Species abundance

(6 marks)

(b) The inventory of biodiversity is implemented for specific purposes and according to the standard and well-established procedures. Outline the **THREE (3)** levels of intensity employed in inventory and demonstrate how each can effectively provide an accurate information on the status of biodiversity.

(14 marks)

Q4 (a) The loss of biodiversity can be due to many factors. Differentiate the loss of biodiversity caused by natural events from anthropogenic factors. Give **THREE (3)** examples of natural causes and **THREE (3)** examples of anthropogenic causes and explain each example clearly.

(10 marks)

(b) Given the scenario in **Q4(a)**, analyze how the following can be protected from further loss of biodiversity.
(i) Lowland dipterocarp forest
(ii) Wetlands ecosystem

(10 marks)

Q5 (a) One way conservation of biodiversity can be best achieved is through effective environmental education programme. Demonstrate how the following target groups can be effectively educated about the importance of biodiversity. Support your answer by providing specific examples.
(i) Primary school teachers
(ii) Urban community

(10 marks)

(b) Analyze the philosophy of sustainable development and explain why it is important to the long-term conservation of biodiversity.

(5 marks)

(c) Conservation of biodiversity can be implemented according to three levels: genetic, species and ecosystem. However, given limited resources (i.e. funding, human resources), you are tasked to prioritize only one of these. Justify which among these levels is best to effectively conserve biodiversity.

(5 marks)

- **END OF QUESTIONS** -