



UNIVERSITI TUN HUSSEIN ONN MALAYSIA

**FINAL EXAMINATION
SEMESTER I
SESSION 2014/2015**

COURSE NAME : PRINCIPLES OF BIODIVERSITY
AND CONSERVATION

COURSE CODE : BWJ 10102

PROGRAMME : 1 BWW

EXAMINATION DATE : DECEMBER 2014 / JANUARY 2015

DURATION : 2 HOURS

INSTRUCTION : ANSWER **ALL** QUESTIONS

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

- Q1** (a) List five (5) importance of biodiversity. (5 marks)
- (b) Explain what is survival of the fittest. (5 marks)
- (c) Show how:
- (i) Competing species can co-exist over time. Given an example.
 - (ii) Natural selection occurs over time. Give an example. (10 marks)
- Q2** (a) Demonstrate how keystone species can indicate ecosystem integrity. (10 marks)
- (b) Name five (5) importance of biodiversity inventory and monitoring. (5 marks)
- (c) Differentiate the application of Shannon-Wiener index from Simpson index. (5 marks)
- Q3** (a) Show how are these pressures pose threat to biodiversity:
- (i) Invasive alien species
 - (ii) Overexploitation (10 marks)
- (b) Given the pressures to the biodiversity as mentioned above [Q3(a)], analyze the potential implications of these threats to the ecosystem services and welfare of the people. (10 marks)
- Q4** Consider this scenario: the Ministry of Natural Resources and Environment (NRE) looks after the overall status of biodiversity in Malaysia while the Johor State Government has the authority over land resources in Johor. Perbadanan Taman Negara Johor (PTNJ) is the local authority that safeguards Taman Negara Johor Endau-Rompin (TNJER).
- (a) Given the above scenario, apply the principles of adaptive ecosystem management that can be implemented to effectively conserve TNJER. Explain the advantage of this set-up. (10 marks)

- (b) Under the same scenario, how do you think the involvement of UTHM can contribute to an effective adaptive ecosystem management of TNJER?
(10 marks)

Q5 (a) List and explain briefly the steps involved in top-down approach to conservation of biodiversity.
(10 marks)

- (b) In conservation practices, justify why establishment of protected areas is always preferred as *in-situ* approach. Support your answer by giving an example.
(10 marks)

- END OF QUESTION -