



UNIVERSITI TUN HUSSEIN ONN MALAYSIA

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

COURSE NAME : TERRESTRIAL ECOLOGY
COURSE CODE : BWJ 20503
PROGRAMME CODE : BWW
EXAMINATION DATE : JANUARY / FEBRUARY 2021
DURATION : 3 HOURS 30 MINUTES
INSTRUCTION : ANSWER ALL QUESTIONS
OPEN BOOK EXAMINATION

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THIS QUESTION PAPER CONSISTS OF FIVE (5) PAGES

- Q1** (a) State **FOUR (4)** branches in ecological study. (4 marks)
- (b) Explain your understanding based on **Figure Q1(b)**. (10 marks)
- (c) Plot A has a total area of 150 m². A total of 6 species can be found in Plot A. Species 1 have 28 individuals, Species 2 have 30 individuals, Species 3 have 37 individuals, Species 4 have 12 individuals, Species 5 have 5 individuals, and Species 6 have 40 individuals.
- (i) Calculate the total 'Species Density' in Plot A. (4 marks)
- (ii) Calculate the Shannon-Weiner Diversity Index (H') in Plot A. (7 marks)
- Q2** (a) Deforestation can occur through two methods known as clear felling and selective logging. By using suitable examples, illustrate and explain how these methods are different from each other. (12 marks)
- (b) Identify plant species that can be found at an elevation of 1100 – 1600 m asl. (1 mark)
- (c) Limestone karst occurs as a result of the dissolution of carbonate rocks by natural water. Name **FOUR (4)** types of karst landscape and compare **ONE (1)** characteristic of each chosen karst landscape. (12 marks)
- Q3** (a) Determine **TWO (2)** environmental conditions of the peat swamp ecosystem. (2 marks)
- (b) Explain in detail about **Figure Q3(b)**. (15 marks)
- (c) Analyze how bare soils occurred in the desert ecosystem. (8 marks)
- Q4** (a) Distinguish tropical deciduous forest from the temperate deciduous forest by giving out **THREE (3)** comparisons. (6 marks)

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- (b) Animals live in the north pole of the earth have adapted to a very cold environment. Explain **FOUR (4)** strategies adopted by the animals to overcome the temperature extremes in this area. (8 marks)
- (c) Identify what kind of ecosystem is 'A' in **Figure Q4(c)** (2 marks)
- (d) Explain how the destruction of the ecosystem 'A' threatened the mangrove ecosystem. (6 marks)
- (e) Given that you are the president of the community service club in your university. You are planning to involve in a tree-planting project along the mangrove area of Tanjung Piai. What kind of mangrove plant will you choose for this tree planting project? Why? (3 marks)

– END OF QUESTIONS



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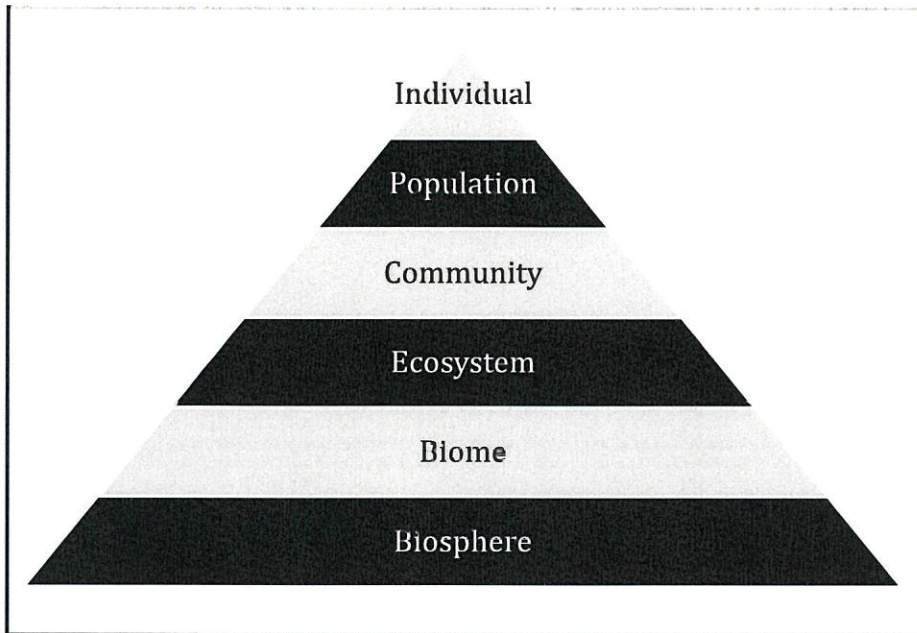


Figure Q1(b)

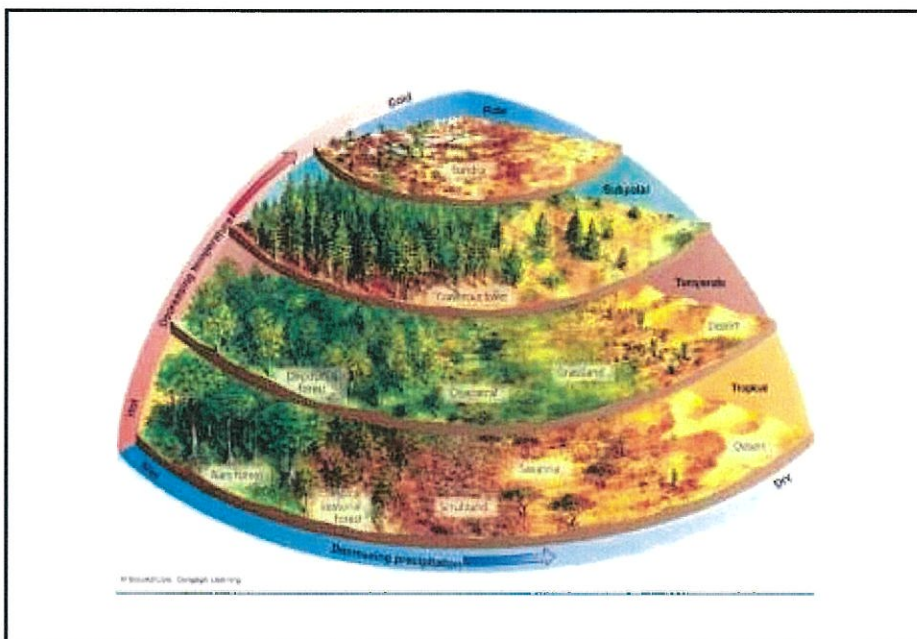


Figure Q3(b)

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FOR MAGAZINE OR ALONG CUEVAS LIMAS...
Untuk Laporan Teknologi dan Sumber Daya Manusia
Teknologi Sains dan Teknologi
Laporan Tahunan 2020

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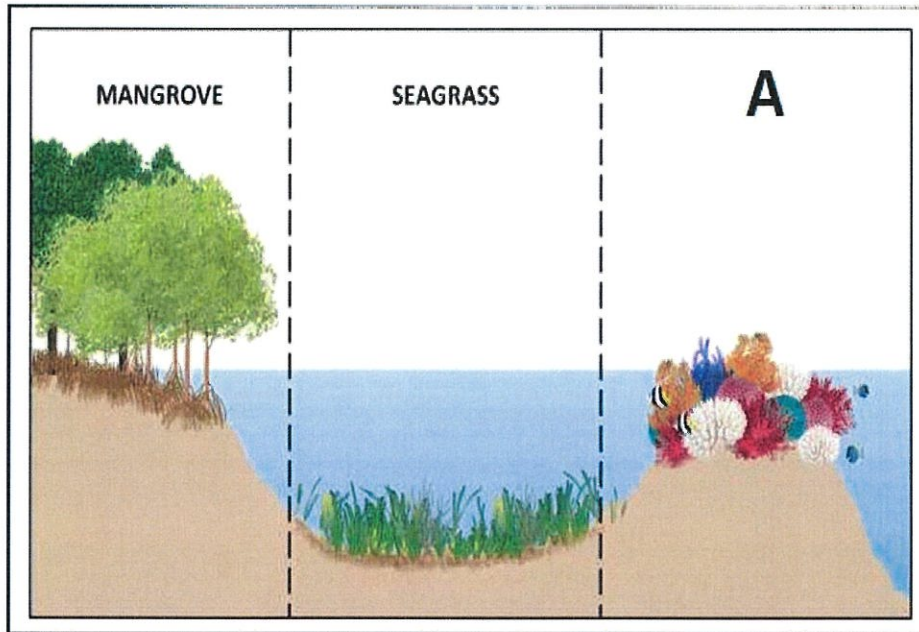


Figure Q4(c)

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