



UTHM
Universiti Tun Hussein Onn Malaysia

UNIVERSITI TUN HUSSEIN ONN MALAYSIA

**FINAL EXAMINATION
SEMESTER I
SESSION 2019/2020**

COURSE NAME : BIODIVERSITY AND GLOBAL ENVIRONMENTAL CHANGE
COURSE CODE : BWJ 30503
PROGRAMME CODE : BWW
EXAMINATION DATE : DECEMBER 2019 / JANUARY 2020
DURATION : 3 HOURS
INSTRUCTION : ANSWER ALL QUESTIONS

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

- Q1** (a) Among the five major extinctions scientists proposed,
- (i) Select **ONE (1)** and state the estimated period it occurred. (2 marks)
 - (ii) Describe the events that caused major loss of biodiversity during that time. (6 marks)
- (b) Biodiversity have existed millions of years before the first human came round. Evidences of earliest human remains are traced back in Africa about 200,000 thousand years ago.
- (i) According to paleoanthropologists, illustrate the movement of human from 200,000 years ago to the modern age. (5 marks)
 - (iii) Outline **TWO (2)** behaviors of ancient humans that are said to be similar with that of the modern humans in relation to their perception of biodiversity. Justify your answer. (12 marks)
- Q2** (a) The Earth's processes are comprised of systems and subsystems that are intricately linked with one another, that delineation of boundary between systems and subsystems is nearly impossible.
- (i) Identify **THREE (3)** subsystems that are encompassing biosphere, lithosphere and hydrosphere altogether. (6 marks)
 - (ii) From the three subsystems provided in **Q2(a)(i)**, select **ONE (1)** and design a feedback loop that is directly or indirectly influencing the Earth's system. (5 marks)
- (b) Compare producer and consumer in terms of energy flow in an ecosystem. (6 marks)
- (c) Scientists have found out that greenhouse gases are responsible for some changes in the Earth's climate systems. Analyze the role of greenhouse gases in global warming. (8 marks)
- Q3** (a) Carbon dioxide is one of greenhouse gases that has caught the curiosity of many scientists worldwide. Evaluate the scientific approach made by researchers to conclude that carbon dioxide is responsible for climate change. (10 marks)

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- (b) Suggest the impacts of the following to biodiversity.
- (i) Coral bleaching (5 marks)
 - (ii) Desertification (5 marks)
 - (iii) Mining (5 marks)

- Q4** (a) Climate change poses threats to biodiversity in many ways than scientists can observe so far.
- (i) Demonstrate the abiotic consequence of climate change. (5 marks)
 - (ii) Analyze how climate change can affect biodiversity. (5 marks)
- (b) UNFCCC is an international environmental treaty, which mainly tackles issues on climate change.
- (i) Define UNFCCC (1 mark)
 - (ii) Differentiate UNFCCC from IPCC. (6 marks)
- (c) Kyoto Protocol is an international agreement under UNFCCC, which makes commitment by signing parties to reduce carbon dioxide emission legally binding. Analyze the reasons why Kyoto Protocol failed to achieve its objectives. (6 marks)
- (d) The Paris Agreement aims to pick-up where Kyoto Protocol fails. Evaluate the strategies of Paris Agreement that make it more effective than Kyoto Protocol. (7 marks)

- END OF QUESTIONS -

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