



UTHM

Universiti Tun Hussein Onn Malaysia

UNIVERSITI TUN HUSSEIN ONN MALAYSIA

FINAL EXAM

SEMESTER II

SESSION 2022/2023

- COURSE NAME : ENVIRONMENTAL HEALTH
- COURSE CODE : BNA 31603
- PROGRAMME CODE : BNA
- EXAMINATION DATE : JULY/AUGUST 2023
- DURATION : 3 HOURS
- INSTRUCTION : 1. ANSWER ALL QUESTIONS
2. THIS TEST IS CONDUCTED VIA CLOSED BOOK.
3. STUDENTS ARE **PROHIBITED** TO CONSULT THEIR OWN MATERIAL OR ANY EXTERNAL RESOURCES DURING THE TEST CONDUCTED VIA CLOSED BOOK

THIS QUESTION PAPER CONSISTS OF FOUR (4) PAGES

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- Q1** (a) Gases in the atmosphere, such as carbon dioxide, trap heat similar to the glass roof of a greenhouse. Define the 'enhanced' greenhouse effect. (3 marks)
- (b) Create pathways that shows the effects of climate change on human health which are often modulated by interactions with ecological processes, social conditions, and adaptive measures. (10 marks)
- (c) Humans and wild animals face new challenges for survival because of climate change. These impacts threaten our health by affecting the food we eat, the water we drink, the air we breathe, and the weather we experience. Examine **TWO (2)** groups of people that would be the most at risk from climate change. (6 marks)
- (d) Human activities have mobilized Earth elements and accelerated the biogeochemical cycles. Point out **TWO (2)** human activities that affected and disturb the biogeochemical cycle below:
(i) Phosphorus cycle
(ii) Nitrogen cycle (6 marks)
- Q2** (a) Describe each terminology used in the field of toxicology below:
(i) Poison
(ii) Toxic agent
(iii) Toxicity
(iv) Toxicant
(v) Toxin (5 marks)
- (b) Environmental stress can be defined as an undesirable transaction between the person and the environment. The demands made by environmental factors on us constitute the sources of environmental stress. To understand environmental stress better, you are required to compose the human-environment relationships. (6 marks)
- (c) Point out **FOUR (4)** general types of environmental stressors. (8 marks)

- (d) Propose actions to reduce air pollution from major sources of air pollutions (6 marks)

Q3 (a) Define environmental epidemiology. (2 marks)

- (b) Briefly explains **TWO (2)** pollutants that have been the focus of most air quality regulations at the national level due to the chief concern from a health perspective. (5 marks)

(c) Most ionizing radiation comes from natural sources, though significant doses may be acquired through occupational or medical exposures. Humans are continuously exposed to radiation from many sources, both natural and artificial. Adverse effects may occur through damage to DNA, and include cancer risk, genetic risks and teratogenesis. Relate **FIVE (5)** man-made sources of radiation. (10 marks)

- (d) As an environmental health inspector who inspects food processing plant to control chemical hazard from the sources, predict **TWO (2)** clinical symptoms on the human that expose to the etiologic agent in food. (8 marks)

Q4 (a) Define the following terms:
(i) Emerging Zoonotic
(ii) Vector borne disease (4 marks)

- (b) Explain **TWO (2)** emerging zoonoses and their conditions that may be linked to their occurrence. (8 marks)

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- (c) Several groups of pesticides are in use at present, these include some types of inorganic chemicals, organic chemicals and a variety of other substances. Investigate **TWO (2)** major groups of pesticides that may give advantages and disadvantages to our life.

(8 marks)

- (d) Copper and lead is a potential contaminant of tap water. Discover the mitigating measures to reduce the exposure to contaminants in the tap water.

(5 marks)

– END OF QUESTIONS –

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