

CONFIDENTIAL



UNIVERSITI TUN HUSSEIN ONN MALAYSIA

**FINAL EXAMINATION
SEMESTER II
SESSION 2021/2022**

COURSE NAME : WATER RESOURCES AND TREATMENT
COURSE CODE : BPF 41003
PROGRAMME CODE : BPC
EXAMINATION DATE : JULY 2022
DURATION : 3 HOURS
INSTRUCTION : 1. ANSWER ALL QUESTIONS
2. THIS FINAL EXAMINATION IS CONDUCTED VIA **CLOSED BOOK**.
3. STUDENTS ARE **PROHIBITED** TO CONSULT THEIR OWN MATERIAL OR ANY EXTERNAL RESOURCES DURING THE EXAMINATION CONDUCTED VIA CLOSED BOOK

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

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Q1 Water is a natural resource. The pure water has created a variety of ecosystems where living and non-living beings are connected in complex.

(Source: Ang, 2015)

(a) Discuss **FIVE (5)** main water resources available in Malaysia with example. (10 marks)

(b) Describe **FIVE (5)** categories of pollutants that cause water pollution in Malaysia with example. (15 marks)

Q2 (a) Explain the functions of a water piping system for a building. (10 marks)

(b) Explain with the aid of sketches, the indoor water supply and sanitary system for double-storey building. (15 marks)

Q3 (a) Illustrate the initial of water treatment process. (15 marks)

(b) Disinfection is the final process in raw water treatment, while chlorine is the most commonly used chemical for disinfection.

Discuss **FIVE (5)** the advantages of chlorine dosage in raw water treatment. (10 marks)

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- Q4** PUTRAJAYA: The health ministry is planning to introduce the Drinking Water Quality Act soon, to further protect against health hazards due to unsafe drinking water, Khairy Jamaluddin said. “Drinking water is a basic human right,” the health minister said at the virtual celebration of World Health Day 2022 today while pointing out that in reality one in three people globally lack access to safe and adequate drinking water.

He said the ministry runs one of the oldest environmental health programmes in the country, the Rural Environmental Sanitation Programme through the Water Supply and Environmental Sanitation Unit (Bakas), which over the past 50 years has played a major role in providing clean and safe water supply to rural communities and contributed to the near-full coverage of clean and safe water supply throughout the country.

Together with the implementation of the National Drinking Water Quality Surveillance Programme, the ministry has managed to help raise the quality of health by ensuring the safety of drinking water provided to the public and monitoring quality thereby reducing the incidence of water-borne diseases or illnesses associated with poor quality of public water supplies.

“The surveillance programme alerts public health and utility personnel if the quality of drinking water deteriorates and enables them to undertake preventive or remedial measures before the occurrence of any major outbreak of disease or poisoning,” he said

(Source: Bernama, 2022)

Analyse factors that need to be considered when choosing water sources to ensure that the public water supplies is not affected.

(25 marks)

-END OF QUESTIONS -

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