



TECHNICAL UNIVERSITY OF MOMBASA

FACULTY OF ENGINEERING AND TECHNOLOGY

DEPARTMENT OF BUILDING & CIVIL ENGINEERING

UNIVERSITY EXAMINATION FOR:

BACHELOR OF TECHNOLOGY IN CIVIL ENGINEERING

TMC4211 HEALTH SAFETY AND ENVIRONMENTAL ENGINEERING

SPECIAL/SUPPLEMENTARY EXAMINATION

SERIES: SEPTEMBER 2018

TIME: 2 HOURS

Instructions to Candidates

You should have the following for this examination

-Answer Booklet, examination pass and student ID

This paper consists of five questions.

Attempt any THREE questions.

Do not write on the question paper.

QUESTION ONE (COMPUSORY 20 MARKS)

(a) State FOUR basic aspects targeted by Occupational Safety and Health (OSH) **(10Marks)**

(b) Define the following terms used in occupational Safety and Health

(i) Major Hazard installation

(ii) Risk Management

(iii) Ergonomics

(iv) Mitigation measures

(10Marks)

ANSWER ANY TWO QUESTIONS

QUESTION TWO (20 MARKS)

Explain the establishment and the role of **ANY** of the following offices as provided in the occupational safety and health Act 2007. **(20 Marks)**

- (a) The director
- (b) Occupational safety and health officer
- (c) Technical advisory committee
- (d) The national council for occupational safety and health

QUESTION THREE (20 MARKS)

Thwake Dam is being constructed in Makueni County. It is located at the confluence of rivers Athi and Thwake. After completion, the dam will be the largest in East and Central Africa.

Discuss:-

- (a) Negative impact of dam on the Environment **(10Marks)**
- (b) positive impact of dam on the Environment **(10Marks)**

QUESTION FOUR (20 MARKS)

- (a) . Briefly explain responsibilities the following as established in the 2014 water act of Kenya
 - (i) Water Resources Authority (WRA)
 - (ii) Water Works Development Agencies (WWDAs) **(10Marks)**
- (b) (i) State the powers bestowed in the Establishment of the Rural Electrification Authority
 - (ii) Briefly explain the Functions of the Authority in 3 (b)(ii) **(10Marks)**

QUESTION FIVE (20 MARKS)

An elevated road is being constructed at Maji Ya Chumvi along Nairobi-Mombasa Highway to fly over the railway line. State the procedure to be followed by Environmental Impact Assessment expert when preparing project report. **(20 Marks)**