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(UNIVERSITY OF CHOICE)

**MASINDE MULIRO UNIVERSITY OF
SCIENCE AND TECHNOLOGY
(MMUST)**

MAIN CAMPUS

**UNIVERSITY MAIN EXAMINATIONS
2021/2022 ACADEMIC YEAR**

**FOURTH YEAR SECOND SEMESTER SUPPLEMENTARY
EXAMINATIONS**

**FOR THE DEGREE
OF
BACHELOR OF TECHNOLOGY IN BUILDING CONSTRUCTION**

COURSE CODE: BTB 463

COURSE TITLE: BUILDING ECONOMICS

DATE: 5TH OCTOBER

TIME: 3 - 5 P.M

INSTRUCTIONS:

1. Programmable calculators and not allowed in this exam
2. This paper contains **FIVE** questions
3. Attempt **QUESTION ONE** and any other **TWO** questions in SECTION B
4. BS (British Standards) Design Codes are permitted for this exam
5. Where information is deemed to be missing, make and state reasonable assumptions.

MMUST observes ZERO tolerance to examination cheating

This Paper Consists of 5 Printed Pages. Please Turn Over.

QUESTION ONE (COMPULSORY -40MKS)

- a) Discuss the concerns of building economics in a built environment. (6mks)
- b) Give a brief historical background of building economics (4mks)
- c) Explain the four facts on economic context of building economics (12mks)
- d) Discuss unit-of-use method of estimation. (4mks)
- e) Explain the importance of building economics in National economy. (5mks)
- f) Give a brief account on the sources of financing construction projects (5mks)

Attempt ANY 2 Questions from this section (30MKS)

QUESTION TWO

Give an account of the following in the context of material, labour and physical capital.

- i) Innovation (5mks)
- ii) Economics of scale (5mks)
- iii) Use available of technology (5mks)

QUESTION THREE

- a) Discuss Religion, Technology and Culture in the context of economic considerations during the design stage. (9mks)
- b) Distinguish between fixed-rate and flexible-rate mortgages. (6mks)

QUESTION FOUR

- a) Discuss in details giving illustrations on two strategies to address prolonged period of construction as way of minimizing initial costs of the project. (6mks)
- b) Give a brief description of the following
 - i) Operational costs (3mks)
 - ii) Utilities (3mks)
 - iii) Maintenance costs (3mks)

QUESTION FIVE

- a) Give brief account on the following:
 - Monetary benefits of the building (4mks)
 - Non-monetary benefits of the building (4mks)
- b) Outline the process of economic analysis (7mks)



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**UNIVERSITY EXAMINATION
2021/2022 ACADEMIC YEAR**

FOURTH YEAR SEMESTER ONE

SPECIAL AND SUPPLEMENTARY EXAMINATIONS

**FOR THE DEGREE
OF
BACHELOR OF SCIENCE IN CIVIL AND STRUCTURAL
ENGINEERING**

COURSE CODE: CSE 451

COURSE TITLE: WATER RESOURCES MANAGEMENT

DATE: 3RD OCTOBER, 2022

TIME: 3 – 5 P.M

INSTRUCTIONS:

1. This paper contains FOUR questions
2. Answer question ONE (compulsory) and any other TWO question
3. Marks for each question are indicated in the parenthesis.
4. Examination duration is **2 Hour**

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This Paper Consists of 2 Printed Pages. Please Turn Over.

QUESTION 1 (30 Mark)

- (a) Discuss factors that make water to be classified as a social and economic good [10 Marks]
- (b) Describe the river erosion processes , its effects and mitigations options in a Watershed [20 Marks]

QUESTION 2 (20 Marks)

- (a) Briefly discuss the characteristics that make water a unique natural resources [5 Marks]
- (b) The global population growth and economic development coupled with climate change has led to an increase in water demand and a decrease in water availability per capita. This has created water allocation challenges leading to conflicts at national, International and basin wide levels. Discuss, and explain various methods of conflict resolution [15marks]

QUESTION 3 (20 Marks)

- (a) Briefly describe the sources of sediments in rivers, their effects and mitigation options [12marks]
- (b) Outline the criticisms of the Integrated Water Resources Management (IWRM)concept [8 Marks]

QUESTION 4 (20 Marks)

Briefly discuss the roles played by various institutional in IWRM [20 Marks]