



TECHNICAL UNIVERSITY OF MOMBASA

SCHOOL OF ENGINEERING AND TECHNOLOGY
DEPARTMENT OF ARCHITECTURE & BUILT ENVIRONMENT

UNIVERSITY EXAMINATION FOR:
DIPLOMA IN QUANTITY SURVEYING
EQS 2305: CONSTRUCTION PLANT AND EQUIPMENT
END-OF-SEMESTER EXAMINATION

YEAR 3 SEMESTER 1

SERIES: DEC 2024

TIME: 2 HOURS

DATE: DEC 2024

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 question ONE (Compulsory) and any other TWO questions.

Do not write on the question paper.

QUESTION ONE - COMPULSORY

(30 marks)

- a) Construction projects involve considerable spending in labour and investment in plant and equipment. Explain FIVE main reasons that will make you use more plant and equipment and not manual labour to execute a project. (10 marks)
- b) The type of plant and equipment used in a particular construction project is determined by various factors. Explain FIVE such factors. (10 marks)
- c) “To buy or to hire?” is a decision that builders must make when they are planning for the use of construction plant and equipment in their business/projects. Highlight the advantages of each form of ownership of construction plant and equipment. (10 marks)

QUESTION TWO (15 marks)

- a) List the FIVE steps/operations involved in handling concrete as a material. (5 marks)
- b) In each of the five stages listed in 2(a) above, identify the main construction plant, equipment or tools used. (10 marks)

QUESTION THREE (15 marks)

The vertical and horizontal movement of construction materials, tools and workers is important for better coordination of work in a construction site. Explain FIVE transporting plant and equipment that you are likely to find in a construction site in Kenya. (15 marks)

QUESTION FOUR (15 marks)

- a) Distinguish between a “Face Shovel” and a “Backhoe”, as excavating plant and equipment. (4 marks)
- b) Give a brief description of a reversing drum mixer. (3 marks)
- c) Highlight FOUR drilling and blasting plant and equipment. (8 marks)

QUESTION FIVE (15 marks)

Describe the following construction plant and equipment:

- a) Cranes (3 marks)
- b) Hoists (3 marks)
- c) Lifts (3 marks)
- d) Truck Dumpers (3 marks)
- e) Pile Drivers (3 marks)