



MACHAKOS UNIVERSITY

University Examinations for 2019/2020 Academic Year

SCHOOL OF ENGINEERING AND TECHNOLOGY

DEPARTMENT OF BUILDING AND CIVIL ENGINEERING

FIRST YEAR SECOND SEMESTER EXAMINATION FOR

CERTIFICATE IN BUILDING TECHNOLOGY

1704/105/CP CONSTRUCTION PLANTS AND EQUIPMENTS

DATE: 18/12/2020

TIME: 2.30-5.30 PM

INSTRUCTIONS TO CANDIDATES

Answer all questions

- 1
 - a) List 6 reasons of using construction plants on (6 marks)
 - b) State three advantages of buying and hiring plants (6 marks)
 - c) State the functions of the following plants
 - i. Bulldozer
 - ii. Grader
 - iii. Scraper
 - iv. Back actor (8 marks)
- 2
 - a) Briefly explain three methods of maintaining plants (9 marks)
 - b) Differentiate between a site dumper and highway dumper (2 marks)
 - c) With an aid of sketches, discuss three types of forklifts (9 marks)
- 3
 - a) state three advantages of using concrete pumps (6 marks)
 - b) With an aid of sketches describe the following types of concreting plants
 - i. Pan mixer
 - ii. Tilting drum mixer (6 marks)
 - c) State the functions of transporting plants (8 marks)
- 4
 - a) Differentiate between a scraper and a grader (8 marks)

- b) Sketch a three wheels roller (5 marks)
- c) Differentiate between a guyed derrick and a gantry (7 marks)
- 5 a) sketch two types of vibrators used in compacting concrete (8 marks)
- b) State five factors to consider when selecting excavating plant (5 marks)
- c) Briefly describe the function of a boiler (4 marks)
- d) State three classification of cranes (3 marks)