



MACHAKOS UNIVERSITY

University Examinations for 2020/2021

SCHOOL OF ENGINEERING AND TECHNOLOGY

DEPARTMENT OF BUILDING AND CIVIL ENGINEERING

FIRST TERM EXAMINATION FOR

DIPLOMA IN BUILDING TECHNOLOGY AND CIVIL ENGINEERING

2707/202/ CT: CONCRETE TECHNOLOGYII

DATE: 7/6/2021

TIME: 2:30 – 5:30 PM

INSTRUCTIONS

- I. Answer all the questions
 - II. All questions carry equal marks
1.
 - a)
 - i) Distinguish between precast and prestress concrete (6 marks)
 - ii) State four advantages and two disadvantages of each (12 marks)
 - b) State two materials used for prestressing (2 marks)
 2.
 - a) Describe the procedure of placing, compacting and curing of concreting (12 marks)
 - b) Calculate the amount of concrete a mixer can mix within one day given the following
 - i. Drum capacity = 0.43m^3
 - ii. Loading time = 3 minutes
 - iii. Discharge time = 1 minute
 - iv. Mixing time = 3 minutesAssume 9 hrs. working per day (8 marks)
 3. With a neat sketch illustrate four joints used in concrete working (20 marks)
 4.
 - a) Discuss wet process of manufacturing concrete (10 marks)
 - b) Differentiate between additives and admixtures (4 marks)
 - c) Discuss three methods of curing concrete (6 marks)