



MACHAKOS UNIVERSITY

University Examinations for 2020/2021

SCHOOL OF ENGINEERING AND TECHNOLOGY

DEPARTMENT OF BUILDING AND CIVIL ENGINEERING

SECOND YEAR SECOND TERM FOR CRAFT CERTIFICATE

IN BUILDING TECHNOLOGY

1704/203BS: BUILDING SERVICES

DATE: 9/6/2021

TIME: 8:30 -11:30 AM

INSTRUCTIONS TO CANDIDATES

This paper consists of FIVE questions.

Answer ALL the questions.

All questions carry equal marks

1.
 - a) Mention two sources of surface water and three sources of underground water. (5 marks)
 - b) List down three advantages of direct cold water supply and three advantages of an indirect cold water supply (6 marks)
 - c) List five materials used in plumbing works. (5 marks)
 - d) Mention four systems of above ground drainage. (4 marks)
2. With the aid of a well labelled single line diagram, illustrate how an indirect cold water system can be installed. (20 marks)
3.
 - a) Define sanitary appliances. (2 marks)
 - b) State five materials that can be used for making sanitary appliances (5 marks)
 - c) Differentiate between soil and waste appliances. (4 marks)
 - d) Describe how a piston type flushing cistern operates (6 marks)
 - e) Give three examples of soil appliances (3 marks)

4. a) Define the following terms;
- soil pipe
 - waste pipe
 - soil stack
 - waste stack
 - ventilating pipe (10 marks)
- b) By means of a well labelled single line diagram, illustrate the installation of a single stack above ground drainage system (10 marks)
5. a) Mention three types of below ground drainage systems and neatly illustrate any two of the systems mentioned earlier (10 marks)
- b) Explain briefly five requirements of an above ground drainage system (10 marks)