



MACHAKOS UNIVERSITY

University Examinations for 2019/2020 Academic Year

SCHOOL OF ENGINEERING AND TECHNOLOGY

DEPARTMENT OF BUILDING AND CIVIL ENGINEERING

FIRST YEAR THIRD SEMESTER EXAMINATION FOR

CERTIFICATE IN BUILDING TECHNOLOGY

CARPENTRY THEORY

DATE: 17/12/2020

TIME: 2:30 – 5:30 PM

INSTRUCTIONS TO CANDIDATES

ANSWER ALL QUESTIONS

1. a) State four personal safety habits pertaining to each of the following
 - i. clothing
 - ii. Workshop safety (4 marks)
 - b) Sketch and label each of the following tools and state the use of each
 - i. Pincers
 - ii. Tenon saw (5 marks)
 - c) Sketch and label a joint in each of the following classifications and state where each may be used
 - i. widening
 - ii. Framing (5 marks)
 - d) Outline the process of preparing timber (6 marks)
2. a) i) define a roof
 - ii) With the aid of a labeled sketch, outline the features of a couple roof (9 marks)
 - b) Explain two types of temporary works (5 marks)
 - c) i) Define timber frame construction
 - ii) Outline the two types of frame construction (6 marks)

- 3 a) state three precautions observed in respect to power tools
- i) Before using
 - ii) When using (6 marks)
- b) State four parts of power tools that are inspected periodically and outline the likely corrective action for each case (4 marks)
- c) Sketch and label part of a roof to show the arrangement of rain water goods (6 marks)
- d) Outline two materials used for rainwater goods (4 marks)
- 4 a) Describe three wood working machines and state one use of each (9 marks)
- b) Explain two timber floor finishes (5 marks)
- c) Explain three factors that may influence quality control of a flooring task. (6 marks)
- 5 a) i) outline the function of a foundation
- ii) With the aid of a labeled sketch, explain the solid slab raft foundation (6 marks)
- b) Sketch and label a section through a suspended timber floor (6 marks)
- c) Sketch and label each of the following
- i) Ranch style fence
 - ii) Gate for ranch style fence (8 marks)