



Machakos University

(University Examinations 2021/2022)

SCHOOL OF ENGINEERING

DEPARTMENT OF MECHANICAL AND MANUFACTURING ENGINEERING

THIRD YEAR FIRST SEMESTER EXAMINATION FOR DIPLOMA IN BUILDING
CONSTRUCTION ENGINEERING & CIVIL ENGINEERING

BCECD 310: WORKSHOP TECHNOLOGY V

DATE:

TIME:

INSTRUCTIONS

Answer all questions in Section A and choose any other TWO in Section B

SECTION A: COMPULSORY (30MARKS).

- 1 (a). State **Five** objectives of industrial safety. (5 marks)
- (b). Outline any **Three** responsibilities of the employer and **Three** of employees under health and safety act. (6 marks)
- (c). Explain briefly **Five** types of personal protective equipment in regard to health and safety. (5 marks)
- (d). Highlight **Six** causes of accident in workshops. (6 marks)
- (e). Using neat sketches describe **Four** measuring instruments used during bench work. (8 marks)

SECTION B (40 MARKS)

- 2 (a). Discuss **Five** classes of fire and give their extinguishing agents. (10 marks)
- (b). Describe the parts and principle of operation of the following pumps;
Centrifugal
Reciprocating. (10marks)

- 3 (a). Name **Six** ways of classifying internal combustion engines. (6 marks)
- (b). Differentiate between a four stroke and two stroke engines. (8 marks)
- (c). Mention **Six** common maintenance checks when serving engines. (6 marks)
4. Describe **Five** firefighting equipment using diagrams. (20 marks)
- 5 (a). Give Five factors to consider when selecting a pump. (5 marks)
- (b). Explain Three types of fuel pumps commonly used in automobiles. (15 marks)