



MACHAKOS UNIVERSITY

University Examinations 2016/2017

SCHOOL OF ENGINEERING AND TECHNOLOGY

DEPARTMENT OF MECHANICAL AND MANUFACTURING ENGINEERING

THIRD YEAR FIRST SEMESTER EXAMINATION FOR DIPLOMA IN CIVIL AND
BUILDING ENGINEERING
WORKSHOP TECHNOLOGY V

DATE: 24/7/2017

TIME: 2:00 – 4:00 PM

INSTRUCTIONS

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

1.
 - a) State any **five** objectives of industrial safety (5 marks)
 - b) Outline any **three** responsibilities of the employer and three of the employees under the health and safety at work act (6 marks)
 - c) Sketch **four** types of files (4 marks)
 - d) Highlight any **six** causes of accidents in workshops. (6 marks)
 - e) Explain the **four** of environmental pollution and give control measure can be taken. (4 marks)
 - f) Name and explain functions of Five safety protective clothing's used in workshop . (5 marks)
2.
 - a) Sketch the following hand tools
 - i Chisel
 - ii Scriber
 - iii Hacksaw
 - iv Ball pein hammer (8 marks)
 - b) Highlight any **six** general health and safety precautions. (6 marks)
 - c) Highlight any **three** precautions to be observed in prevention of electric shock (3 marks)

- d) Highlight any **three** duties of first aider. (3 marks)
3. a) Name **six** main parts of a petrol Engine. (3 marks)
- b) With the aid of a sketch explain the operation of the coil ignition system. (17 marks)
4. With the aid of sketches explain the operation of Four-stroke petrol engine. (20 marks)
5. a) Explain the procedure of checking whether the cylinder head is bend. (10 marks)
- b) Explain the procedure of checking ovality and taper of a cylinder bore. (10 marks)