



# MACHAKOS UNIVERSITY COLLEGE

(A Constituent College of Kenyatta University)  
University Examinations for 2015/2016

SCHOOL OF ENGINEERING AND TECHNOLOGY

DEPARTMENT OF MECHANICAL AND MANUFACTURING ENGINEERING

FIRST SEMESTER EXAMINATION FOR DIPLOMA IN MECHANICAL AND  
AUTOMOTIVE ENGINEERING

W/SHOP PROCESSES AND PRACTICE I

DATE: 3/8/2016

TIME: 8:30 – 10:30 AM

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## INSTRUCTIONS:

Answer Question One in Section A and Any Other two questions in Section B

### SECTION A IS COMPULSORY) - 30 MARKS

1. a) i) list down any **five** objectives of industrial safety (5 marks)  
ii) Define the term accident (2 marks)
- b) i) Accidents don't just happen in the workshop, they are caused in reference to this statement describe any **five** possible causes of accidents in a workshop. (5 marks)  
ii) State any **Three** responsibilities of the employer and **Two** responsibilities of the employee with regard to health and safety at work act (5 marks)
- c) i) List any **four** general safety measures in a workshop. (4 marks)  
ii) List down any **Three** effects of accidents in regard to each of the following  
- Owner/industry

- Worker
  - Society
- (9 marks)

**SECTION B (ATTEMPT ANY TWO QUESTIONS FROM THIS SECTION)**

2. a) State any five precautions which should be taken for fire prevention. (5 marks)
- b) Describe the following types of fire extinguishers and the classes of fire which are suitable for each of them.
- i. Water
  - ii. Water with additives
  - iii. Spray foam
  - iv. Dry powder
  - v. Carbon-dioxide
- (15 marks)
3. a) Describe the following methods of filing
- i) Draw filing (3 marks)
  - ii) Cross filing (3 marks)
- b) By defining the grade of cut of a file, list **three** standard grades of cut in common use and give an application for each grade of cut (8 marks)
- c) Draw a clear sketch of a hacksaw and label the parts. (6 marks)
4. a) Describe tapping operation in reference to hand cutting tools. (3 marks)
- b) Sketch and label the three sets of taps (12 marks)
- c) List any **five** types of files (5 marks)
5. a) Describe the procedure of carrying out chipping operation and the precaution associated with it. (6 marks)
- b) Describe the procedure of carrying out dieing operation (6 marks)
- c) Write short notes on the following
- i. Bench vice
  - ii. Hand vice
  - iii. Ball peen hammer
  - iv. File card
- (8 marks)