

2506/105

2507/105

WORKSHOP TECHNOLOGY AND

LIFE SKILLS

Oct./Nov. 2018

Time: 3 hours



THE KENYA NATIONAL EXAMINATIONS COUNCIL

**DIPLOMA IN AERONAUTICAL ENGINEERING
(AIRFRAMES AND ENGINES OPTION)
(AVIONICS OPTION)**

MODULE I

WORKSHOP TECHNOLOGY AND LIFE SKILLS

3 hours

INSTRUCTIONS TO CANDIDATES

You should have the following for this examination:

Answer booklet;

Mathematical tables/Non-programmable scientific calculator.

*This paper consists of **EIGHT** questions in **TWO** sections; **A** and **B**.*

*Answer **THREE** questions from section **A** and **TWO** questions from section **B**.*

All questions carry equal marks.

Maximum marks for each part of a question are as indicated.

Candidates should answer the questions in English.

This paper consists of 3 printed pages.

Candidates should check the question paper to ascertain that all the pages are printed as indicated and that no questions are missing.

SECTION A: WORKSHOP TECHNOLOGY (60 marks)

Answer THREE questions from this section.

1. (a) Explain ways of protecting oneself from each of the following:
- (i) toxic substances;
 - (ii) noise;
 - (iii) excessive light;
 - (iv) dust and fumes;
 - (v) chemicals.
- (10 marks)
- (b) Outline the applications of each of the following aircraft fasteners:
- (i) screws;
 - (ii) nuts;
 - (iii) rivets;
 - (iv) taper pins.
- (8 marks)
- (c) Name **two** engineering materials. (2 marks)
2. (a) With the aid of a sketch, explain the **three** types of flames used in oxy-acetylene welding, giving **two** applications in each case. (12 marks)
- ✓ (b) Outline **five** reasons for carrying out quality control. (5 marks)
- ✗ (c) List **six** finishing processes employed in aircraft hardware. (3 marks)
3. (a) With the aid of sketches, describe each of the following filing techniques:
- (i) straight filing;
 - (ii) draw filing.
- (10 marks)
- (b) Illustrate the following lathe operations:
- (i) knurling;
 - (ii) taper turning;
 - (iii) boring.
- (9 marks)
- (c) Outline **two** applications of aircraft hardware. (1 mark)

