# KENYA AERONAUTICAL COLLEGE

**DIPLOMA IN AERONAUTICAL ENGINEERING**

YEAR 3, TERM 1

**AIRFRAMES TECHNOLOGY**

DIP 08 MECHANICAL.

**END TERM**

**NAME: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

**DATE: November 9, 2012 TIME: 2 ½ HOURS**

**STARTING TIME: 0800 HRS**

**Instructions:**

* **Attempt all the questions**

QUESTION 1

1. Identify which type of fire protection system is termed as Rate of rise detection system;

 and describe the theory of operation of Sport detector and Thermocouple system. (11mrks)

1. With the aid of a sketch describe the operation of a Systron Donor fire detection system.(9mrks)

QUESTION 2

1. Name two types of tubular fire detectors (apart from systron donor) and briefly explain how they function (9mrks)

 (b) Explain the testing of Overheat fire warning system for operational capabilities. (5 marks)

 (c) Stating what areas of aircraft Smoke detectors are likely to be used; describe a toxic Gas

 Detector (6mrks)

QUESTION 3

1. Identify an Anti-Icing system whose component could trigger a fire to occur in an aircraft; and sketch its layout (10 marks).
2. Explain how propeller Anti- Icing is carried out for an aircraft flying at 35,000ft above sea level

 (5 marks)

1. In a tabulated manner give three types of fire extinguishers, types of agents and their respective container color coding. (5mrks)

QUESTION 4

With the aid of a figure of an aircraft showing Typical De-icer boot locations, name and explain

 four components fitted to a Pneumatic De-Icing system. (10mrks).