KENYA AERONAUTICAL COLLEGE

DIPLOMA IN AERONAUTICAL ENGINEERING

SUBJECT : COMM & NAVIGATION SYSTEM

CLASS : 09 AV (2ND YEAR 1ST TERM)

TIME : 2 HRS

DATE : 9TH OCTOBER, 2012

1. (a)Draw a detailed block schematic diagram of basic communication hence explain the operation of:
   * 1. Transmitter path
     2. Receiver path **(12marks)**

(b) State four functions of a radio receiver **(4marks)**

(c)Differentiate the following terms

1. Information and information source
2. Channel and noise **(4marks)**
3. (a)State the two broad class of noise **(2marks)**

(b) Outline three different types of external noise, discuss under the following topics

1. Source and causes
2. Remedy  **(6marks)**

(c)Show that the noise voltage produced by a resistor is given by;



1. (a)Using radio frequency spectrum, draw a table indicating the frequency and two applications of the followings waves
2. Gamma rays
3. Very high frequency
4. Infra-red radiation
5. Low frequency  **(12marks)**

(b) Differentiate between hardwire and soft wire channels and give two examples in each case  **(6marks)**