



EAST AFRICAN SCHOOL OF AVIATION

AIS/ICAO 021 No. 35

FINAL

SUBJECT: FLIGHT NAVIGATION

STREAM: AIS COURSE No. 35

Duration: 2 Hrs

DATE: 16/12/2016

TIME 8.30 – 10.30 AM

INSTRUCTION TO CANDIDATES

1. This paper consists of **TWO (2)** Pages
2. Attempt all questions
3. Read and understand all questions before attempting

QUESTION ONE

Briefly explain the units of measurement of a mean solar day.

(6 Marks)**QUESTION TWO**

- a) **Name** the two reference lines that may be used to positively identify a particular position on the surface of the Earth. **(4 Marks)**
- b) **State** at least three methods that are used in indicating scale on maps and charts. **(6 Marks)**
- c) **List** any three important qualities of a map projection **(6 Marks)**
- d) **Name** the three units that are used in measuring distance. **(3 Marks)**

QUESTION THREE

In which zone will you find a place whose:

- a) Longitude is 120° West
- b) Longitude is 90° West
- c) Longitude is 45° East
- d) Longitude is 150° West
- e) Longitude is 165° East **(10 Marks)**

QUESTION FOUR

- a) What difference in time corresponds to a change of longitude 30 degrees, 45 minutes and 15 seconds? **(3 Marks)**
- b) Find the **True direction** if the Compass direction is 110 degrees and variation is 8 degrees west and deviation is 6 degrees east **(3Marks)**
- c) What is the **Compass direction** if the True direction is 150 degrees and variation is 20 degrees east and deviation is 10 degrees west? **(3 Marks)**

QUESTION FIVE

Write the following coordinates in the correct format:

- a) 4 degrees and 2 minutes south and 155 degrees and 5 minutes East
- b) 30 degrees and 0 minutes north and 170 degrees and 25 minutes west
- c) 40 degrees and 20 minutes south and 40 degrees and 33 minutes West
- d) 0 degrees and 30 minutes south and 145 degrees and 42 minutes West **(8 Marks)**

QUESTION SIX

- a) Relief is the manner in which mountains, hills, valleys etc are shown on the map. **List** any three ways in which relief can be depicted in a map. **(6 Marks)**
- b) Briefly **describe** the shape of the earth. **(3 Marks)**

QUESTION SEVEN

State the three phases of twilight and explain briefly.

(9 Marks)