



# TECHNICAL UNIVERSITY OF MOMBASA

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FACULTY OF ENGINEERING AND TECHNOLOGY

DEPARTMENT OF MECHANICAL & AUTOMOTIVE ENGINEERING

**UNIVERSITY EXAMINATION FOR:**

**DIPLOMA IN NAUTICAL SCIENCE**

**ANS 2212: CHARTWORK PRACTICES II**

**END OF SEMESTER EXAMINATION**

**SERIES: AUGUST 2017**

**TIME: 2 HOURS**

**DATE:** Pick Date Jul 2017

## Instructions to Candidates

You should have the following for this examination

- Answer Booklet, examination pass and student ID
- Parallel ruler/ setsquares and protractors
- Pencil HB or B
- Scientific Calculator (set to 2 decimal places)

This paper consists of **FIVE** questions. Attempt any **THREE** questions.

The following are provided with the Question paper

- Chart 5052
- Deviation Tables 1, 2, 3 and 4
- Tables of Meridional Parts
- Admiralty Tide Tables (NP201 – 208)

**Do not write on the question paper.**

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## **Question ONE**

With aid of illustrations describe the following:

- a) Circular Position Line **(10 marks)**
- b) Straight Position Line **(10 Marks)**

## **Question TWO**

Discuss the light characteristics of the following:

- a) Varne **(5 Marks)**

- b) Cap D'Aplrech (5 Marks)
- c) Le Touquet (5 Marks)
- d) Royal Sovereign (5 Marks)

### Question THREE

While MV Tudor was steaming in a south-westerly course, the OOW took the bearing at 1100hrs as follows:

- i. S. Foreland bore  $332^{\circ}$  G
- ii. S Goodwin bore  $030^{\circ}$  G.

If the Gyro Error is  $2^{\circ}$  L, fix the ships position at 1100 hrs (20 Marks)

### Question FOUR

At the 1200hrs the bearing of Beachy Head and Royal Sovereign were taken such that they were in transit. If the vessel was 12 miles, off Beachy Head. Find the distance of Royal Sovereign from the Ship

(20 Marks)

### Question FIVE

You are on MV Kibarani on a morning watch. At 0900 S Goodwin Lt Vessel bore  $034^{\circ}$ G. At the same time S Foreland Lt House bore  $336^{\circ}$ G.

- a) Find the ship's position at 0900 if the Gyro Error is  $2^{\circ}$ H (4 Marks)
- b) Find the distance of Varne from the position (12 Marks)
- c) At 1100 hrs the vessel was at a distance of 5 miles at a bearing  $345^{\circ}$ G. find the ships speed. (4 Marks)