



TECHNICAL UNIVERSITY OF MOMBASA

FACULTY OF ENGINEERING AND TECHNOLOGY

DEPARTMENT OF MECHANICAL & AUTOMOTIVE ENGINEERING

UNIVERSITY EXAMINATION FOR:

DIPLOMA IN NAUTICAL SCIENCE

ANS 2103 : TERRESTIAL AND COASTAL NAVIGATION

END OF SEMESTER EXAMINATION

SERIES: DECEMBER 2016

TIME: 2 HOURS

DATE: Pick Date Dec 2016

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

Do not write on the question paper.

Question ONE

Appropriate representation, discuss the following:

- a) Diurnal tides **(10 marks)**
- b) Semi-diurnal tides **(10 Marks)**

Question TWO

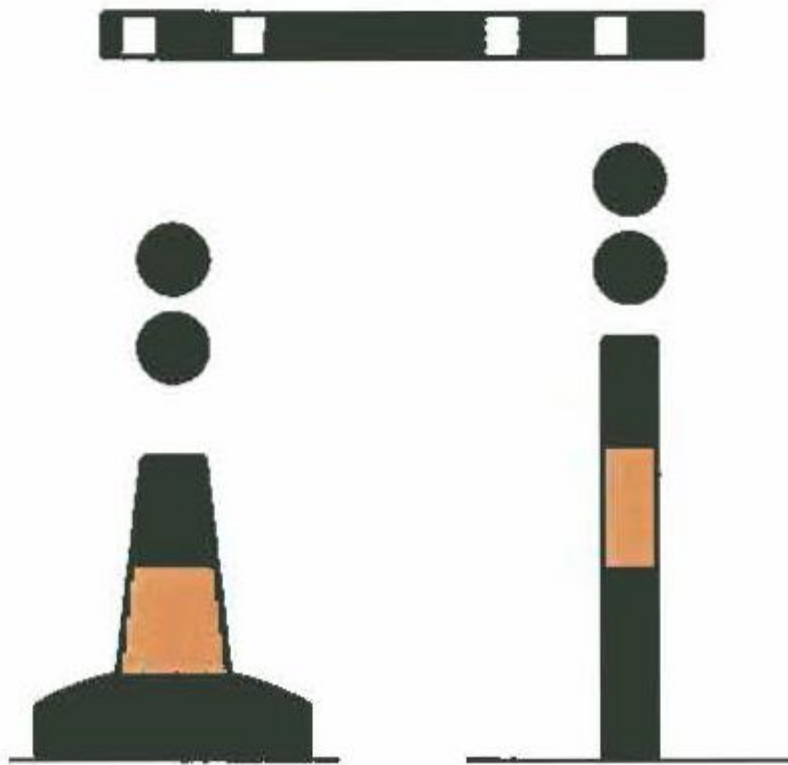
Define and discuss the following terminologies:

- a) Mean High Water Springs (MHWS) **(5 Marks)**
- b) Mean High Water Neap (MHWN) **(5 Marks)**
- c) Mean Low Water Springs (MLWS) **(5 Marks)**
- d) Mean Low Water Springs (MLWN) **(5 Marks)**

Question THREE

a) Identify and describe the figure below:

(10 Marks)



b) Further, describe its functions and night time identification from a visual lookout

(10 Marks)

Question FOUR

Using appropriate illustrations discuss the following phenomena

a) Spring Tides

(10 Marks)

b) Neap Tides

(10 Marks)

Question FIVE

Using the figure below describe the IALA buoyage system for system B

(20 Marks)

