



TECHNICAL UNIVERSITY OF MOMBASA

SCHOOL OF BUSINESS

DEPARTMENT OF MANAGEMENT SCIENCE

UNIVERSITY EXAMINATION FOR:

BACHELOR OF MARITIME MANAGEMENT (COMMERCIAL)

BMM 4106 : MARITIME TECHNOLOGY I – NAVAL ARCHITECTURE

END OF SEMESTER EXAMINATION

SERIES: APRIL 2016

TIME: 2 HOURS

DATE: Pick Date May 2016

Instructions to Candidates

You should have the following for this examination

-Answer Booklet, examination pass and student ID

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

Do not write on the question paper.

Question ONE

- a. Discuss the influence of a classification society in shipping **(10 Marks)**
- b. Explain the functions of a classification society in the design stage of a ship **(10 Marks)**

Question TWO

- a. Assuming you are a shipping manager summoned by the board directors of your company to explain why one of your ships has to be dry docked. Give a reasoned opinion on what is the purpose of dry docking the vessel. **(5 marks)**
- b. Discuss what will be the expectations in a Hull Inspection on the dry dock **(15 Marks)**

Question THREE

- a. Sketch the side and mid ship profile of a ship and indicate the following
 - i). Length overall
 - ii). Length between perpendiculars
 - iii). Summer load waterline
 - iv). Camber

v). Breadth Moulded

vi). Breadth Extreme

vii). Depth

viii). Draught

ix). Freeboard

x). Rise of the floor

(10 Marks)

b. State the purpose of the following:

Camber, Freeboard, Length overall, Length between perpendiculars, Breadth extreme. **(10 Marks)**

Question FOUR

- a. Name the three linear and three rotational motions that a ship is free to move with six degrees of freedom **(6 Marks)**
- b. With reference to ship construction:
- i). State why transverse bulkheads are incorporated in the design and construction **(2 Marks)**
 - ii). Explain how the spacing of the watertight bulkheads is determined in the construction **(2 Marks)**
- c. With reference to regulations governing the construction of bulkheads, state what is the minimum number of bulkheads required a ship must have. **(10 Marks)**

Question FIVE

Discuss the significance of deducted spaces in the computation of gross tonnage and net tonnage of a ship. **(20 Marks)**