TECHNICAL UNIVERSITY OF MOMBASA

FACULTY OF ENGINEERING AND TECHNOLOGY

DEPARTMENT OF COMPUTER SCIENCE & INFORMATION TECHNOLOGY

UNIVERSITY EXAMINATION FOR:

DIPLOMA IN MARINE ENGINEERING

EMR 2205: ICT 3

END OF SEMESTER EXAMINATION

SERIES:DECEMBER2016

TIME:2HOURS

DATE: Pick DateSelect MonthPick Year

Instructions to Candidates

You should have the following for this examination

-Answer Booklet, examination pass and student ID

This paper consists of **FIVE** questions. Attemptquestion ONE (Compulsory) and any other TWO questions.

Do not write on the question paper.

Question ONE

A) Define the following by giving examples

I.	Software	(2 Marks)
II.	System Software	(2 Marks)
III.	Compiler	(2 Marks)
IV.	Operating System	(2 Marks)

B) Explain the various preventive and curative maintenance activities (8 Marks)

C) State and explain TWO basic uses of CAD packages and simulators (4 Marks)

Question TWO

A) Explain the compilation process and running of a C Program (10 Marks)

B) Discuss the arithmetic operations used in a C program using an example (10 Marks)

Question THREE

A) Explain the purposes of any FOUR marine specific packages you are familiar with (8 Marks)

B) Write a program that will calculate the sum of N numbers (12 Marks)

Question FOUR

A) Explain the various number systems in use (8 Marks)

B) Convert the following octal fraction into a decimal fraction: (45.352) (3 Marks)

C) Convert the decimal number 62.625 into a binary number (3 Marks)

D) Convert the following binary number into an octal number: (1000001110101111) (3 Marks)

E) Convert the following hexadecimal number into a decimal number: (DF) (3 Mark)

Question FIVE

Discuss the following control and decision statements by giving valid syntaxes and examples in each

I. For loop (5 Marks)
II. If else (5 Marks)
III. Switch (5 Marks)
IV. Do while (5 Marks)