TECHNICAL UNIVERISTY OF MOMBASA

Faculty of Engineering & Technology

DEPARTMENT OF COMPUTER SCIENCE & INFORMATION TECHNOLOGY

DIPLOMA IN MARINE ENGINEERING (DME)

DMR 2206: ICT III

SPECIAL/SUPPLEMENTARY EXAMINATION
SERIES: JUNE 2015
TIME: 2 HOURS

Instructions to Candidates:
You should have the following for this examination
- *Answer Booklet*

This paper consists of **FIVE** questions.
Attempt question **ONE (Compulsory)** and any other **TWO** questions
Maximum marks for each part of a question are as shown

This paper consists of **TWO** printed pages

Question One (Compulsory)

a) Write a matlab command that would output the following:

(i) 0 1.5 3 4.5 **(3 marks)**

$$\begin{pmatrix} 2 & 3 & 4 \\ 5 & 6 & 7 \\ 8 & 9 & 0 \end{pmatrix}$$

(ii) **(3 marks)**

b) Explain each of the following matlab command syntax: **(2 marks)**

(i) >> x = (1 2 3 4 5 6)

(ii) > > **y** = (4 5 6: 7 8 9 : 0 2 1) **(2 marks)**

c) Describe how MATLAB features is utilized in marine engineering field **(10 marks)**

Question Two

Discuss preventive maintenance under each of the following heading:

a) Electrical maintenance **(5 marks)**
b) Hardware/software maintenance **(5 marks)**
c) Mechanical maintenance **(5 marks)**
d) Power line noise **(5 marks)**

Question Three

a) What is software **(2 marks)**

b) Describe any FOUR functions of operating system **(8 marks)**

c) State and explain any FOUR types of operating systems giving examples of each **(10 marks)**

Question Four

Discuss characteristics and benefits of each of the following application software:

(i) C++
(ii) Microsoft Visio 2010
(iii) Microsoft Project 2010
(iv) AutoCAD 2010 **(20 marks)**

Question Five

a) Write a C++ program that would allow an input value and output the statement according to the following condition:

70 and 100 – Excellent
60 to 69 – Credit
50 to 59 – Pass
Below 50 – Fail **(10 marks)**

b) Write a C++ program that would compute the following output:
10, 9, 8, 7, 6, 5, 4, 3, 2, 1 FIRE! **(10 marks)**