



TECHNICAL UNIVERSITY OF MOMBASA

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Faculty of Engineering and Technology  
Department of Mechanical & Automotive Engineering  
UNIVERSITY EXAMINATION FOR:  
Diploma in Marine Engineering (Y2S1)  
EMR 2223 : Research Methods I (Paper 2)  
SPECIAL/SUPPLEMENTARY EXAMINATION  
SERIES: SEPTEMBER 2018  
TIME: 2 HOURS  
DATE: Sep 2018

**Instruction to Candidates:**

You should have the following for this examination

- *Examination Pass & Student ID Card*
- *Answer booklet*

This paper consists of **FIVE** questions. Attempt any **THREE** questions.  
Maximum marks for each part of a question are as shown.

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

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**Question ONE**

- a) Define the meaning of research and explain the characteristics of research. **(10 marks)**  
b) State any TEN factors to be considered when selecting a project. **(10 marks)**

**Question TWO**

- a) Describe the steps in the research process. **(10 marks)**  
b) State any FIVE types of data. **(10 marks)**

**Question THREE**

- a) Describe the types of samples. **(10 marks)**  
b) Describe any FIVE methods of Observation when collecting data. **(10 marks)**

**Question FOUR**

- a) Explain the contents of the format of a project proposal. **(14 marks)**  
b) Describe the 3 types of Questionnaires. **(6 marks)**

**Question FIVE**

- a) Describe any FIVE ethical considerations when doing research. **(10 marks)**
- b) State any FIVE types of reference materials. **(5 marks)**
- c) Mention the data processing operations. **(5 marks)**