



TECHNICAL UNIVERSITY OF MOMBASA

Faculty of Engineering and Technology
Department of Mechanical & Automotive Engineering
UNIVERSITY EXAMINATION FOR:
Diploma in Marine Engineering
Diploma in Nautical Sciences
EMR 2226 & 2228 : Research Methods II
SPECIAL/SUPPLEMENTARY EXAMS
SERIES: AUGUST 2019
TIME: 2 HOURS
DATE: Pick Date Aug 2019

Instruction to Candidates:

You should have the following for this examination

- *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.

Question ONE

- a) Briefly describe the steps involved in research process with suitable illustration (10 marks)
- b) State and explain any FIVE ethical issues associated with data collection (10 marks)

Question TWO

- a) Data collection is an important aspect of any type of research study. There are two major sources of data used by researchers. Briefly explain these sources and state their advantages and disadvantages when used in a given research study. (10 marks)
- b) Explain the essential steps that a researcher should use in data collection. (10 marks)

Question THREE

- a) State and explain briefly any THREE types of knowledge that research can add. (6 marks)
- b) State and explain briefly the main components a research design. (10 marks)
- c) Briefly mention sources of existing literature. (4 marks)

Question FOUR

a) Research can be classified from the following three perspective

- i. Application of research study
- ii. Objectives in undertaking the research
- iii. Inquiry mode employed

Briefly explain the various classes of research **(10 marks)**

b) State and explain the main components of a research design **(10 marks)**

Question FIVE

a) In an event of carrying out research studies, a researcher reviews related literature of materials in relation to problem of the research, briefly explain the essential steps involved in formulating literature review and the challenges that may be encountered during this review. **(12 marks)**

b) State and explain briefly any FOUR qualities of an effective research thesis. **(8 marks)**