



**JARAMOGI OGINGA ODINGA UNIVERSITY OF SCIENCE AND TECHNOLOGY**  
**SCHOOL OF SPATIAL PLANNING & NATURAL RESOURCE MANAGEMENT**

**UNIVERSITY EXAMINATIONS 2022/2023**

**SECOND YEAR FIRST SEMESTER EXAMINATION FOR THE DEGREE OF BACHELOR  
OF SPATIAL PLANNING AND DESIGN AND BSC WATER RESOURCES  
MANAGEMENT**

**PNB 1205: RESEARCH METHODOLOGY IN PLANNING**

Date: April 2022

Time: 3 hours

**INSTRUCTIONS:**

- This paper has **five** questions
- Answer question **1**(Compulsory) and **any two** other questions
- Write all answers in the answer booklet provided

Q1. (a) "Research is a process of steps used to collect and analyze information to increase our understanding of a topic or issue". Briefly discuss the statement highlighting the steps involved in a scientific research process. [12Mks]

(b) Explain the **meaning** of and **use** of **theory** in research [8Mks]

(c) Explain the difference between the following research designs

(i) Qualitative and Quantitative research [2Mks]

(ii) Cross sectional and Longitudinal research [2Mks]

(iii) Basic and Applied Research [2Mks]

(d) What is the importance of research for a society? [4Mks]

2 (a) "Specifying the research question clearly is central to the success of a research project". Explain your understanding of this statement in the context of the importance of research question in a research process. [8Mks]

(b) Why is Literature review considered an important foundation to a research project [6Mks]

(c) Explain the meaning of the following terms in research giving examples in each case **concepts, indicators/variables, objectives** and **hypothesis** [4Mks]

Q3 (a) Apart from interviews, identify and describe any **One** method of collecting data, showing its advantages and disadvantages. [7Mks]

(b) What **ethical** elements would you include in a consent form for interview based research [6Mks]

(c) Explain how you would **analyze qualitative** data collected during a research [7Mks]

Q4. a) i) What is meant by 'population' in a research? [2Mk]

ii) What is the difference between a sample frame and a sample size? [2Mks]

b) Why do researchers use samples of their population? [4Mks]

(c) Differentiate between the following types of sampling procedures

i) Simple Random Sampling and Systematic Random Sampling [4Mks]

ii) Stratified Random Sampling and Cluster (Area) Random Sampling [4Mks]

iii) Snow ball and Purposive Sampling [4Mks]

Q5 (a) i) Differentiate between **inferential** and **descriptive** statistics used in analyzing data collected during a research [2Mks]

- ii) Identify and describe any FOUR descriptive statistics that can be used to analyze characteristics of quantitative data collected in a research study. [4Mks]
- iii) Identify and describe any considerations needed in choosing inferential statistics for use in analyzing your quantitative data [8Mks]
- b) Explain the meaning and role of proper citations and referencing in research [6Mks]