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## ZIMBABWE EZEKIEL GUTI UNIVERSITY

### FACULTY OF HEALTH, SCIENCE AND TECHNOLOGY

#### DEPARTMENT OF SCIENCE AND TECHNOLOGY

#### EXAMINATION PAPER

<b>COURSE CODE</b>	:	CDT 207
<b>COURSE TITLE</b>	:	Research Methods for Computing and Technology
<b>SPECIAL REQUIREMENTS</b>	:	None
<b>DURATION</b>	:	3 Hours
<b>LEVEL</b>	:	2.2
<b>DATE</b>	:	2022

09 FEB 2022

#### INSTRUCTIONS TO CANDIDATES:

1. The question paper has 5 questions.
2. Answer any 4 questions.

### Question 1

Discuss the importance of educational research in Information and Technology [25]

### Question 2

- a. Explain the following terms, giving examples:
  - i. Population [5]
  - ii. Sample [5]
- b. Discuss probabilistic and non-probabilistic sampling strategies, giving examples [20]

### Question 3

- a. What is bias in relation to research? [3]
- b. Discuss the following types of research bias
  - i. Data collection bias [4]
  - ii. Selection or participant bias [4]
  - iii. Self-selection or volunteer bias [4]
- c. How can bias be avoided, use different situations in your response. [10]

### Question 4

- a. What do you understand by research [2]
- b. What is the difference between research method and research Methodology? [5]
- c. Explain simulation research [3]
- d. What are the benefits of using simulation modelling research techniques [9]

### Question 5

Discuss any four data collection methods [25]