REFORMED CHURCH UNIVERSITY

FACULTY OF EDUCATION AND SOCIAL SCIENCES

MASTER OF EDUCATION IN EARLY CHILDHOOD DEVELOPMENT

RESEARCHING EDUCATION: METHODS AND STATISTICS

MECD 114

PART 1 SEMESTER 2 EXAMINATION

TOTAL MARKS   [100]

DATE: DECEMBER 2022

Time: 3 Hours

INSTRUCTIONS

1 This paper has *five (5)* questions

2 Answer *any* **three (3)**

3 Each question carries *100 marks*

4 Start each question on a new page

5 Candidates may use non-programmable, noiseless and cordless calculators.

6 Candidates are provided with tables of statistical formulae.

1. With reference to examples, examine the following terms, as they are used in educational research:
   i. Ontology (25)
   ii. Epistemology (25)
   iii. Paradigm (25)
   iv. Methodology (25)
2. Examine the significance of any two of the following philosophical worldviews in doing research with children with special needs in any cultural context of your choice
   a. pragmatism (50)
   b. positivism (25)
   c. interpretivism (25)
3. Examine the rationale for using the mixed method in researching in a context of the education of ECD learners. (100)

4. Explain the five pillars of Education 5.0 and justify its importance in research practice for ECD.

5. The table below shows marks scored by ten students in biology and physics

TABLE 1

STUDENT	PHYSICS	BIOLOGY
A	61	80
B	67	62
C	51	56
D	69	75
E	60	64
F	52	42
G	78	65
H	81	80
I	62	68
J	20	50

a. Calculate the standard deviation for the physics scores.

b. Calculate the standard deviation for the biology scores.

c. Calculate z scores for the following and comment on them:

   i.   Student 'b' in physics

   ii.   Student 'd' in biology

d. Compute Pearson's product moment correlation coefficient for the distribution and comment.

e. Compute the regression equation for the data.

End of Paper