MODULE NAME:	MODULE CODE:
INTRODUCTION TO EDUCATION RESEARCH	INER7411

ASSESSMENT TYPE:	**TAKE-HOME ASSESSMENT (PAPER ONLY)**
TOTAL MARK ALLOCATION:	60 MARKS
TOTAL TIME:	**This assessment should take you 1 Hour to complete, however you have 21 Hours (midnight to 9PM on the same day) to submit. This additional time has been allocated to allow for the download, completion and upload of your submission.**

By submitting this assessment, you acknowledge that you have read and understood all the rules as per the terms in the registration contract, in particular the assignment and assessment rules in The IIE Assessment Strategy and Policy (IIE009), the intellectual integrity and plagiarism rules in the Intellectual Integrity Policy (IIE023), as well as any rules and regulations published in the student portal.

INSTRUCTIONS:

1. *Please **adhere to all instructions**. These instructions are different from what is normally present, so take time to go through these carefully.*
2. ***Independent work is required**. Students are not allowed to work together on this assessment. Any contraventions of this will be handled as per disciplinary procedures in The IIE policy.*
3. ***No material may be copied from original sources, even if referenced correctly, unless it is a direct quote indicated with quotation marks.***
4. *All work must be adequately and correctly referenced.*
5. *You should paraphrase (use your own words) the concepts that you are referencing, rather than quoting directly.*
6. *Marks will be awarded for the quality of your paraphrasing.*
7. *This is an open-book assessment.*
8. *Assessments must be typed unless otherwise specified.*
9. ***Ensure that you save a copy of your responses.***
   - 9.1 *Complete your responses in a Word document.*
   - 9.2 *The document name must be your **name.student number.Module Code**.*
   - 9.3 *Once you have completed the assessment, upload your document under the **submission link** in the correct module in Learn.*

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Test Outcomes

Learning Unit/s Objectives covered in this test:

- *LU1; LO2*
- *LU1; LO3 and LO6*
- *LU1; LO7, LO8 and LO10*
- *LU2; LO1 and LO3*
- *LU2; LO6 and LO7*

At the end of this assessment, students should be able to:

- *Illustrate a cyclical research process;*
- *Analyse the concept of paradigms and paradigm shifts,*
- *Compare positivism, interpretivism and critical realism in terms of their epistemological, ontological, metatheoretical, methodological and axiological positions;*
- *Summarise the nature and components of theories;*
- *Analyse the functions of theories;*
- *Differentiate between inductive and deductive theorising;*
- *Argue in favour of a particular topic in Education;*
- *Formulate research questions based on the research problem;*
- *Analyse the use of hypotheses in quantitative research;*
- *Formulate null and alternative hypotheses.*

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Question 1 **(Marks: 6)**

Educational research refers to the systematic collection and analysis of data related to the field of education. Research may involve a variety of methods and various aspects of education including student learning, teaching methods, teacher training, and classroom dynamics.

Dudu is interested in conducting a research study on the perceived impact of online tuition on the social development of the young child. She already identified and analysed a possible research problem for the study. She also searched, found, and read several previous literatures on the topic of interest to her study too.

List the **steps** in the **research cycle** that Dudu **still needs to follow** and **complete** before she can write her research report.

Question 2 **(Marks: 16)**

In science and philosophy, a paradigm is a distinct set of concepts or thought patterns, including theories, research methods, postulates, and standards for what constitutes legitimate contributions to a field.

Q.2.1	Differentiate between a **paradigm** and a **paradigm shift**.	(8)

Dudu is interested in the perceived impact of online tuition on the social development of the young child. She is thus interested in a perceptual study that further suggests a qualitative research design. Dudu will most likely interview teachers and gather data which will comprise of these teachers' perceptions towards online tuition and the impact thereof on the social development of young children.

Q.2.2	Indicate the **paradigm most suited** for Dudu's study and design as depicted above.	(2)
Q.2.3	Briefly discuss the **paradigm** as indicated in your answer in question 2.2 above. The various positions of this paradigm are **not needed** as part of your discussion.	(6)

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Question 3		**(Marks: 16)**
The basic components of theories are essential elements used in describing a theory and are fundamental in all scholarly theories. They represent the language of theory and are universally used by researchers, theorists and scholars in all discipline working from different traditions.		
Q.3.1	Elaborate on **assumptions** as an element/component of theories.	(4)
Q.3.2	Give a brief account of the **functions of theories**.	(4)
Q.3.3	There are essentially two directions of theorizing, namely inductive and deductive theorising. In table form, differentiate between **deductive and inductive theorising**.	(8)

Question 4		**(Marks: 8)**
Identifying an area of interest or concern that will translate into a researchable topic is the first step in a research study's quest. Most of us identify and deal with issues and problems on a daily basis, but we do not always conduct formal research on them. However, even these aspects of our everyday experiences, and seemingly unimportant situations that we take for granted, could embody the next pursuit to understanding or explaining a certain aspect in the vas field of human existence.		
Dudu's research colleague, Thandi, is interested in teachers' experiences rather than their perceptions as in Dudu's case. She wants to conduct an exploration into the experiences of mathematics teachers. Her focus is centred around those mathematics teachers who only teach grade 7 learners. Thandi is interested in the experiences of these mathematics teachers in reducing mathematical anxiety among grade 7 learners. She aims to include grade 7 mathematics teachers in the Umgungundlovu district in Kwazulu-Natal.		
Q.4.1	Construct an appropriate **research title** to suit the scenario above. The title should be indicative of the design of the study and the population/sample that will be considered. The theme under study should also be apparent.	(4)
Q.4.2	Generate a **research question** that will be used to guide Thandi's study.	(4)

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Question 5 (Marks: 14)

A hypothesis is a tentative statement about a relationship between variables; a statement that you aim to accept or reject at the end of your research. Put differently, it is a statement that a researcher creates in order to assist him or her to predict a certain outcome. It is therefore an educated guess about a predicted outcome.

Consider the following Hypothesis for a Natural Sciences (NS) experiment that Dudu and Thandi's supervisor, Gerald is engaging with. *If I drop a half a pack of Peppermint flavoured Mentos through a Geyser-tube into a 2-liter of Coca Cola that is only half full, then the Coca Cola will react and start to rise.* Gerald is demonstrating this experiment to Grade 7 teachers teaching Natural Sciences and Technology in the Eastern Cape. This experimental workshop series forms part of a larger research study that is investigating science experiments as an aid to enhance science and technology teaching practices.

Q.5.1	Briefly discuss the concept **null hypothesis** (with no reference to the above).	(4)
Q.5.2	Write a **null hypothesis** for Gerald's intended study (with reference to the above).	(4)
Q.5.3	Differentiate between **independent** and **dependent variables**.	(6)

END OF PAPER

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