



MACHAKOS UNIVERSITY

University Examinations 2019/2020 Academic year

SCHOOL OF EDUCATION

DEPARTMENT OF

.....YEAR SEMESTER EXAMINATION FOR

DOCTOR OF PHILOSOPHY IN EDUCATIONAL ADMINISTRATION

ECT 918: ADVANCED INSTRUCTIONAL METHODS IN BIOLOGY.

DATE:

TIME:

INSTRUCTIONS

ANSWER QUESTION ONE AND ANY TWO OTHERS.

QUESTION ONE (15 MARKS)

- a) Critically explain four strategies of meaningful learner Engagement and how they relate to the theory of multiple intelligence. (12 marks)
- b) Justify three ways in which the phases of a learning cycle can be applied to a named Practical Activity in Biology. (9 marks)
- c) Explain three ways in which Experiment method differs from Group discussion. (9 marks)

QUESTION TWO (15 MARKS)

Evaluate five ways in which the project method is advantageous to the field investigation.

QUESTION THREE (15 MARKS)

Some Scientists have proposed that the goal of science is to: generate the most powerful research programme (Iakatosianism); appreciate the historical reality and change our view of nature (Kuhnneanism); generate solutions to human problems. (Pragmatism); contribute to technological development (modernism).

Discuss and Illustrate how these views would be integrated into the planning for teaching Biology.

QUESTION FOUR (15 MARKS)

Defend and illustrate three ways in which ICT may enhance the teaching of Biology.

QUESTION FIVE (15 MARKS)

Evaluate the use of the Vee-diagram as a tool to plan for a practical assessment with reference to a named topic in Biology?