

UNIVERSITY OF ESWATINI

Faculty of Education

Department of Curriculum and Teaching

Main Examination Paper

Semester 2 2021

M Ed (Physics)

Title of Paper: **Curriculum Studies in Physics II**

Course Number: **CTE 622**

Time allowed: **Three Hours (3hrs)**

Information and INSTRUCTIONS

Write answers in appropriate academic style and voice. Please include specific, concrete details from your coursework, readings, research, and appropriate theories to support your answers. As time allows, please carefully reread and proofread your answers. This paper contains five questions

1. Choose any **THREE** questions. Each carries 25 marks.
2. Any written material not intended for marking should be **CLEARLY CROSSED OUT**.
3. Ensure that **EACH** page clearly shows the question answered.

THIS PAPER SHOULD NOT BE OPENED UNTIL INSTRUCTED BY THE INVIGILATOR

1. Design an exploratory survey of the Public understanding of Covid-19 among high school learners. In your design, pay particular attention to the problem statement, research questions, and instrument pilot and analysis tool. [25]

2. Indigenous Swazi knowledge is largely ignored, without any serious study of the use of scientific principles. Design studies of the following aspects of indigenous Swazi culture:
 - a. Thermal properties of the traditional Swazi hut
 - b. The manufacture of steel weapons and tools by indigenous Swazi ironsmiths.
 - c. Thermal properties of earthenware pots used for cooking and cooling drinking water.
 - d. The physics of any indigenous musical instrument. [25]

3. A common trend in Southern African schools is that they have a former glory in Science education, indicated by lots of idle, dysfunctional and broken equipment. The derelict state of the laboratories and absence of a qualified laboratory assistant means that practical Physics activities are not likely to occur. If you are appointed to be responsible for quality Physics Education, what policy changes would you recommend to change the derelict state of Physics education described above? [25]

4. How can Eswatini public schools benefit from developments in the digital space and multimedia technology in Physics Education? [25]

5. In 2018 some teachers banned smartphones at public schools. In 2019 there came Covid 19. The Ministry of Health recommended social distancing, use of face masks, frequent washing of hands, and sanitising alcohol in public spaces. Analyse the changes in the digital device policy and practice before and during the Covid 19 pandemic. [25]