



MACHAKOS UNIVERSITY

University Examinations for 2021/2022 Academic Year

SCHOOL OF HUMANTIES AND SOCIAL SCIENCES

DEPARTMENT OF SOCIAL SCIENCES

FOURTH YEAR SECOND SEMESTER EXAMINATION FOR

BACHELOR OF EDUCATION (ARTS)

AHT 419: SCIENCE & TECHNOLOGY

APH 410: HISTORY AND PHILOSOPHY OF NATURAL SCIENCE

DATE:

TIME:

INSTRUCTIONS:

Answer Question One and Any Other Two Questions.

QUESTION ONE (COMPULSORY) (30 MARKS)

- Discuss any **five** factors that led to the emergence of scientific revolution in Europe during the 17th century. (10 marks)
- Basing your argument on the factors listed in 1(a), examine **five** impacts of scientific revolution on world civilization during the 19th century. (20 marks)

QUESTION TWO (20 MARKS)

Using relevant examples, examine the various scientific discoveries and invention that have been achieved during the medieval ages in Europe in respect to:

- Inventions in the field of agriculture. (5 marks)
- Inventions in industry (5 marks)
- Inventions in the field of medicine (5 marks)
- History of rail transport (5 marks)

QUESTION THREE (20 MARKS)

Citing examples, compare and contrast Thomas Kuhn's '*paradigms*' of scientific study with Imre Lakatos' '*research programmes*'

QUESTION FOUR (20 MARKS)

Using Karl Popper's *Falsification Theory*, distinguish science from non-science. (

QUESTION FIVE (20 MARKS)

Assess any **five** challenges facing the development of science and technology in Africa.