

FEDERAL UNIVERSITY OF TECHNOLOGY, MINNA.
SCHOOL OF SCIENCE AND TECHNOLOGY EDUCATION.
DEPARTMENT OF SCIENCE EDUCATION.

COURSE TITLE: HISTORY AND PHILOSOPHY OF SCIENCE, TECHNOLOGY AND MATHEMATICS (STM)

COURSE CODE: EDU 211 CREDIT UNITS: 3

SESSION: 2018/2019 FIRST SEMESTER EXAMINATION

INSTRUCTION: Answer question ONE and any other THREE Questions, at least one question from each section.

TIME ALLOWED: 2 Hours


SECTION A

1. a) State any five reasons why the 19th century is regarded as the beginning of the scientific age.
b) Briefly and succinctly discuss the goal of acquiring knowledge and developing skills in technology.
c) Give the modern numerals in ATTIC numerals: (a) 17 (b) 25 (c) 122 (d) 220 (e) 5,120.
2. The Muslim contribution to science came in between the Middle Ages of Western Europe which comprise of two phases.
 - a) Mention the two phases
 - b) Discuss briefly the development of science within scientific ages and the differences between the scholars of these Ages on their contribution to the development of science.
 - c) Give brief explanation on what you understand by science as an Institution
 - d) What do you understand by the following?
 - i. Inference
 - ii. Indirect observation
 - iii. Difference between Formal and Empirical Sciences
 - iv. Three basic questions of science

SECTION B

3. The influence of technology on the entire global society is beyond imagination. Justify this statement.
4. Enumerate and discuss the classes of technology, technology literacy and interdependency of science, technology and society.

SECTION C

5. a). Use Egyptians numeration system to find:- (a) $54 + 13$, (b) $30 + 10$, (c) $412 + 357$ and (d) $990 + 812$
b). Give the modern numerals in IONIA numerals: (a) 46 (b) 351 (c) 854
c). In the Herodianic notation, for example, the Symbol  represents = 5
(i) Symbol () represents = 10, (ii) Symbol () represents = 100
(iii) Symbol () represents = 1000 (iv) Symbol () represents = 10,000
6. Long before the earliest written records, there were drawings that indicate some knowledge of elementary Mathematics and time measurement based on stars. Justify the statement by giving four relevant examples to support this.