FEDERAL UNIVERSITY OF TECHNOLOGY, MINNA
SCHOOL OF TECHNOLOGY EDUCATION
DEPARTMENT OF SCIENCE EDUCATION
FIRST SEMESTER 2013/2014 SESSION EXAMINATION

COURSE TITLE: History and Philosophy of Science, Technology and Mathematics (STM)
COURSE CODE: EDU 211 (3Units)
TIME ALLOWED: 3 Hours
INSTRUCTION: You must attempt question one and any other three (3) questions

1. Enumerate ten (10) benefits you can derive from the utilization of Science and Technology
2. (a). Mention ten (10) great scientists you know and their respective areas of specializations in the field of science.
   (b). Explain the contributions of any two (2) of the following scientists towards revolutionizing science:
   I. Galileo Galilee
   II. Rene Descartes
   III. Sir Isaac Newton
   IV. Von Neuman
3. (a). Write brief notes on the following about the nature and growth of science:
   I. Paleolithic Age
   II. Neolithic Age
   III. Enlightenment Period
   (b). State clearly any four (4) laws of nature.
4. (a). Explain the nature and philosophy of:
   I. Science
   II. Technology and
   III. Mathematics

   (b). Write short notes on the following:
   I. Generalized concepts and methods in technology.
   II. Characteristic features of technology identified by Mc Connel (1982).
   III. Sulba Sutras (800BC - 500BC).
   IV. Panini (5^{th} Century).
   V. Pingala (3^{rd} - 1^{st} Century).
5. Discuss the process of historical development of the field of Mathematics in the ancient Greece
6. (a). Use the knowledge of numerical symbols of the ancient Egypt to replace the following: 54, 13 and 67
   (b). find the sum of 412 and 357
   (c). subtract 812 from 990
   (d). use the ancient Greek symbols (attic symbols) to represent 17, 25, 120, 322 and 5,120
   (e). use the Ionian numerals to represent 46, 351 and 854