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KIBABII UNIVERSITY

UNIVERSITY EXAMINATIONS
2016/2017 ACADEMIC YEAR

SECOND YEAR SECOND SEMESTER
SPECIAL/SUPPLEMENTARY EXAMINATIONS

FOR THE DEGREE OF B.ED (SCIENCE)

COURSE CODE: SPH 213

COURSE TITLE: PHYSICS, SOCIETY AND DEVELOPMENT

DURATION: 2 HOURS

DATE: 20TH SEPTEMBER 2017 **TIME:** 2:30 – 5:30PM

INSTRUCTIONS TO CANDIDATES

- Answer **QUESTION ONE** (Compulsory) and any other two (2) Questions.
- Indicate **answered questions** on the front cover.
- Start every question on a new page and make sure question's number is written on each page.

This paper consists of 3 printed pages. Please Turn Over



KIBU observes ZERO tolerance to examination cheating

QUESTION ONE (30 MARKS)

- a) Discuss the environmental impact of cell phones under the following subtitles:
- (i) Obtaining resources for manufacture. (2marks)
 - (ii) Disposal of used cell-phones (2marks)
- b) Since the achievement of independence the government and the people of Kenya have been committed to expanding education in Kenya. Give four reasons for this commitment. (4marks)
- c) Give a brief account of the Copernicus view of the solar system (5marks)
- d) Giving examples, discuss the development of tablet computers under the following subtitles:
- (i) Early tablet computers (3marks)
 - (ii) Post 2010 tablets (3marks)
- e) What are Magnetically Levitated (Maglev) trains? (1mark)
- f) State the three types of motion the earth negotiates according to the Copernican theory. (1mark)
- g) Using relevant examples, briefly discuss the factors that led to the failure of FPE of 1970 (5 marks).
- h) Distinguish between basic and applied research. Give an example of each. (4 Marks)

QUESTION TWO

- a) Describe the difference between smart phones and featured phones. (4marks)
- b) Give a brief history of the development of the following operating systems used in smart phones:
- (i) Symbian (4marks)
 - (ii) iOS (3marks)
 - (iii) Android (3marks)
 - (iv) Blackberry (3marks)
- (c). Define the terms, Physics, Society and Development (3marks)

QUESTION THREE

- a) The American physical society (APS) is the world's second largest organization of Physicists. List any two scientific journals that the society publishes. (2 Marks)
- b) Discuss two major challenges that faced the government's efforts in providing free primary education in 2003 (6marks)
- c) Briefly describe the growth and use of high technology under the following consumers of high- tech products citing the latest technological development.
- i) Military (4 Marks)
- ii) Transport (8 Marks)

QUESTION FOUR

- a) The tablet computer and the associated special operating software are examples of pen computing technology. Define a tablet computer. (1mark)
- b) Give a brief account of the life of the Germany born theoretical physicist Albert Einstein clearly explaining his contribution to the world of science and change of political policy in regard to the use of nuclear energy. (11marks)
- c) State and explain Four major contributions of Michael Faraday to physics. (8Marks)

QUESTION FIVE

- (a). Write the following abbreviations in full; H.E.L.B, K.A.L.R.O,C.U.E. State one major function of each of these bodies. (6marks)
- (b). Distinguish between the resistive and capacitive touchscreen technology used in tablets (2marks)
- (c). Discuss the technological advances in space exploration that took place as a result of cold war. (5marks)
- (d). Give a brief history of the Jua Kali industry in Kenya. (3 Marks)
- (e). Define global warming as adopted by the American Physical society (APS). Briefly describe the role played by the APS in the mitigation of global warming. (4marks)