

UNIVERSITY OF SWAZILAND
MAIN EXAMINATION, SECOND SEMESTER
MAY 2017

FACULTY OF SCIENCE AND ENGINEERING

**DEPARTMENT OF ELECTRICAL AND ELECTRONIC
ENGINEERING**

TITLE OF PAPER: PROFESSIONAL PRACTICE
COURSE CODE: EE411

TIME ALLOWED: THREE HOURS

INSTRUCTIONS:

- 1. There are six questions in this paper. Answer any FIVE questions. Each question carries 20 marks.**
- 2. If you think not enough data has been given in any question you may assume any reasonable values.**

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HAS BEEN GIVEN BY THE INVIGILATOR**

THIS PAPER CONTAINS SEVEN (7) PAGES INCLUDING THIS PAGE

Question 1

- a) What is globalisation? (4)

- b) What developments have fuelled the globalisation phenomenon?(6)

- c) Name any ten globalisation services that you can think of. (5)

- d) Would you agree with those who think that globalisation is terms dictated by the USA Army and industry combine? (5)

Question 2

- a) What are the five basic elements for Engineering Professional Practice?(5)
- b) Which legal instrument provides for the enforcement of discipline for engineers and what are possible punishments for infringement? (10)
- c) What are the penalties for indiscipline? (5)

Question 3

- a) What is the Intellectual Property and what are the two main branches it comprises of? (4)
- b) We have respectively, a patent, a copy right, a trade mark and a trade secret. Tell us what each is about and why is it important to an engineer. (16)

Question 4

- a) What does Occupational Health and Safety concern itself with? (4)
- b) What are the main causes of diseases that affect workers? (4)
- c) Name any eight (8) main causes of accidents at a work place? (4)
- d) What can be done to prevent or minimise accidents at a work place? (6)
- e) What is the role of the state (government) in matters of Health and Safety in a work place? (2)

Question 5

- a) Why do we need to use our engineering principles to improve the natural environment? (4)
- b) Where do we use Coltan and why? (4)
- c) Briefly say something about the Coltan crisis. (4)
- d) Why has Bulembu become a ghost town? (4)
- e) What are the aims of Environment Chemistry and Environmental Technology courses respectively? (4)

Question 6

- a) What is total quality management and what is a process? (10)
- b) Give at least five definitions of quality. (5)
- c) Turn around these definitions to be statements of risk. (5)