

UNIVERSITY OF SWAZILAND
FACULTY OF SCIENCE & ENGINEERING
DEPARTMENT OF ELECTRICAL & ELECTRONIC ENGINEERING

MAIN EXAMINATION MAY 2015

TITLE OF PAPER: PROFESSIONAL PRACTICES

COURSE CODE: **EE411**

TIME ALLOWED: **THREE (3) HOURS**

INSTRUCTIONS:

1. Answer any FIVE of the SIX questions.
2. Each question carries 20 marks.
3. Marks for different sections are shown in the right-hand margin

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This paper contains seven (7) pages including this page

Question 1

- a) Define Engineering? (5)

- b) Name at least 8 activities that are involved in engineering? (4)

- c) How would you define an Electrical Engineering? (4)

- d) Where do Electrical Engineers work? (4)

- e) What are the attributers of a professional Engineering student? (3)

Question 2

- a) Should Engineers be familiar with legal issues in the environment they operate? (10)
- b) In most countries exists an "Engineering Council", which is established by an Act of Parliament. What is the purpose for such an establishment? (6)
- c) Why do we need codes and standards in the Engineering profession?(4)

Question 3

- a) What is the Intellectual Property and what are the two main branches it comprises of? (8)

- b) Define respectively, a patent, a copy right and a trade mark? (6)

- c) Name three organisations responsible for Intellectual Property issues worldwide and regionally. (3)

- d) What is a Trade Secret? (3)

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) Why have engineers to be registered and/or licensed? (5)

- b) What are the consequences of an engineer who is indisciplined? (5)

- c) The engineer works in a legal environment which he has to be familiar with. Give any five (5) examples of such legal environment? (10)