

UNIVERSITY OF SWAZILAND
MAIN EXAMINATION, SECOND SEMESTER
MAY 2018

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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THIS PAPER CONTAINS SEVEN (7) PAGES INCLUDING THIS PAGE

Question 1

- a) How would you define Engineering? (5 Marks)
- b) Name at least 8 activities that are involved in Engineering? (4 Marks)
- c) How would you define an Electrical Engineering? (4 Marks)
- d) Where do Electrical Engineers work? (4 Marks)
- e) What are the attributers of a professional Engineering student? (3 Marks)

Question 2

- a) Should Engineers be familiar with legal issues in the environment they operate?
(10 Marks)
- 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 Marks)
- c) Why do we need codes and standards in the Engineering profession?
(4 Marks)

Question 3

- a) What is the Intellectual Property and what are the four branches it comprises of? (6 Marks)
- b) Briefly define a patent, a copy right, a trade mark and a trade secret? (8 Marks)
- c) Name three organisations responsible for Intellectual Property issues regionally and worldwide. (3 Marks)
- d) Why is Intellectual Property important for Engineers? (3 Marks)

Question 4

- a) How would you define a Contract? (4 Marks)

- b) What makes an agreement a Contract? (4 Marks)

- c) What does Contract Enforcement entail? (4 Marks)

- d) If Uniswa had employed you as an assistant lecturer and all of a sudden Uniswa decides to terminate your employment without notice. How would you go about to seek remedy for Breach of Contract? (6 Marks)

Question 5

- a) What is the difference between morals and ethics? (5 Marks)

- b) Do you think engineers need to know about ethics? (5 Marks)

- c) What is a code of Ethics and why do you think most organisations have developed codes of Ethics? (5 Marks)

- d) Who does an engineer interact with in his daily life or work place? (5 Marks)

Question 6

- a) What is the importance of Health and Safety in a work place? (4 Marks)

- b) Do you think issues such as sexual harassment and physical violence can cause Occupational Health hazards at a work place? (4 Marks)

- c) Name four causes of accidents in factories? (2 Marks)

- d) What can be done to minimise or prevent these accidents? (5 Marks)

- e) Who are the key stakeholders in the Health and Safety activity and what are their respective roles? (3 Marks)

- f) Why do cleaners normally put “danger warning signs” whenever they clean floors? (2 Marks)