

**UNIVERSITY OF ESWATINI
MAIN EXAMINATION FIRST SEMESTER
NOVEMBER 2019**

FACULTY OF SCIENCE AND ENGINEERING

DEPARTMENT OF ELECTRICAL AND ELECTRONIC ENGINEERING

TITLE OF PAPER: Professional Practice

COURSE CODE: EEE411

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.

THIS PAPER SHOULD NOT BE OPENED UNTIL PERMISSION HAS BEEN GIVEN BY THE INVIGILATOR

THIS PAPER CONTAINS SEVEN (7) PAGES INCLUDING THIS PAGE

Question 1

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

Question 2

- a) Should Engineers be familiar with legal issues in the environment they operate? Give reasons to support your answer. (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 five branches it comprises of? (6 Marks)

b) Briefly define a patent, a copy right, a trade mark, a trade secret and a geographic indication? (5 Marks)

c) Name three organisations responsible for Intellectual Property issues (3 Marks)

d) Why is Intellectual Property important for Engineers? (3 Marks)

e) Who is responsible for Intellectual Property in ESWATINI (3 Marks)

Question 4

- a) How would you define a Contract? (4Marks)
- b) What makes an agreement a Contract? (4 Marks)
- c) What does Contract Enforcement entail? (4 Marks)
- d) If Uneswa had employed you as an assistant lecturer and all of a sudden Uneswa decides to terminate your employment without notice. How would you go about to seek remedy for Breach of Contact? (8 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)