



TECHNICAL UNIVERSITY OF MOMBASA

Faculty of Engineering and Technology

Department of Electrical and Electronic engineering

UNIVERSITY EXAMINATION:

Diploma in Electrical Power Engineering

Electrical installation technology II

EEP 2203

SPECIAL/SUPPLEMENTARY EXAMINATION

SERIES: SEPTEMBER 2018

TIME: 2 HOURS

Instructions to Candidates

You should have the following for this examination

-Answer Booklet, examination pass and student ID

This paper consists of **five** Questions;. Attempt any **THREE** Questions.

Do not write on the question paper.

Question ONE

(a.) Explain:-

- (i) Generation of static charges and electricity
- (ii) Dangers posed by static electricity
- (iii) Dangers of static electricity peculiar to hospital operating theatres and how they are overcome

(11 marks)

(b) Define the following and TWO regulation requirements for each

- (i) caravan and caravan site
- (ii) Temporary installation

(9 marks)

Question TWO

(a) Define a wiring system

(b) Distinguish between the areas of application of the following in electrical

Installation and state two advantages of each

- (i) PVC
- (ii) PILC
- (iii) MIMS

(9 marks)

(c) Explain the use catenary wiring system

(2 marks)

Question THREE

(a) Describe-

- (i) Lightning stroke
- (ii) Effect of a lightning stroke
- (iii) The objective of a lightning protection system

(7 marks)

(b) (i) Define a hazardous area

(ii) Describe the classification of hazardous areas and the wiring and accessories applicable for each class

(8 marks)

(c) State the electrical safety and control devices required for rotating electrical Machines

(5 marks)

Question FOUR

State:

(i) The TWO main forms of corrosion

(ii) FOUR methods of protecting metals against corrosion

(6 marks)

Explain. -

(i) The sacrificial method of cathodic protection

(ii) Why copper and aluminium are described as corrosion resistant,

(8 marks)

(c) State:

(i) Four sensing elements used as heat detectors in fire alarm circuits.

(ii) Instances in which smoke and heat detectors give false alarms

(6 marks)

Question FIVE

(a) Explain Diversity and State the advantage of its application in installation design

(6 marks)

(b) Explain the factors for :-

(i) selection of a wiring system

(ii) determining cable rating.

(14 marks)