



TECHNICAL UNIVERSITY OF MOMBASA

School of Engineering and Technology

Department of Electrical and Electronic engineering

Diploma in Electrical Power Engineering

Electrical installation technology II

EEP 2203

END OF SEMESTER EXAMINATION

SERIES: AUGUST 2024

TIME: 2 HOURS

Instructions to Candidates

You should have the following for this examination

-Answer Booklet, examination pass and student ID

Attempt THREE of the following FIVE questions

All questions carry equal marks

Do not write on the question paper.

Question ONE

(a) (i) Define a damp situation.

(ii) State:

- (I) Requirement of cables installed in a damp situation.
- (II) Two precautionary measures taken on long conduit runs in damp situations.
- (III) The recommended wiring system in a cold store and the siting of control gear.

(10 marks)

(b) State:

- (ii) Dangers posed by static electricity.
- (iii) How effects of static electricity are prevented.

(6 marks)

(c) (i) Define a temporary installation.

(ii) State the regulation requirements of a temporary installation

(4 marks)

Question TWO

Explain: -

(a) (i) THREE factors to be considered in selecting a wiring system.

(ii) Diversity in electrical installation design and state TWO Advantages gained by its application.

(10 marks)

(b) Explain:-

- (i) Hazardous areas
- (ii) Classifications of hazardous areas and the wiring system adopted for each class.
- (iii) Flame proof enclosure for electrical apparatus.

(10 marks)

Question THREE

(a) State FOUR considerations to determine whether a building requires Lighting protection.

(4 marks)

(b) Explain:-

- (i) Lighting strike and the danger it poses
- (ii) The parts of a building lighting protection system.
- (iii) State the extent of a protected zone and how it can be extended.

(16 marks)

Question FOUR

- (a) with reference to corrosion explain
- (i) Deep pitting
 - (ii) Cathodic protection
 - (iii) TWO methods of cathodic protection
- (10marks)
- (c) Explain how factories produce atmospheric corrosive pollutants and list THREE of the more destructive ones. (4marks)
- (C) (i) State FOUR methods of protecting metals against corrosion.
- (ii) Explain why copper and aluminum are described as corrosion resistant while they are known to corrode
- (6 marks)

Question FIVE

- (a) Define and State for each the regulation requirements of the following
- (i) temporary installation.
 - (ii) Caravan and caravan site
- (10 marks)
- (b) Explain FIVE factors to be considered to determine cable rating. (5 marks)
- (c) State the FOUR sensing elements used as heat detectors in fire alarm systems. (5 marks)