School of University Polytechnic
Diploma in Electrical Engineering
Mid Term Examination - Nov 2023

Duration : 90 Minutes
Max Marks : 50

Sem III - N1DI303B - Basic Electronics Engineering

General Instructions
Answer to the specific question asked
Draw neat, labelled diagrams wherever necessary
Approved data hand books are allowed subject to verification by the Invigilator

1)	Explain drift current and diffusion current in a PN junction.	K2 (2)
2)	What is a half adder circuit?	K1 (3)
3)	Explain is the breakdown mechanism.	K2 (4)
4)	Explain how a half adder can be implemented using basic logic gates.	K2 (6)
5)	Make use of the binary number system and explain its importance in computing.	K3 (6)
6)	Describe the operation of a 3-to-8 decoder using a truth table.	K3 (9)
7)	Analyze logic gates and their role in digital circuits.	K4 (8)
8)	Analyze the concept of virtual ground in op-amp circuits.	K4 (12)

OR

	Analyze the control unit of a microprocessor work.	K4 (12)