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School of University Polytechnic

Diploma in Electrical Engineering
Mid Term Examination - Nov 2023

Duration : 90 Minutes
Max Marks : 50

Sem III - N1DI302B - Electrical Measurements and Measuring InstrumentsGeneral 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 the difference between direct and indirect measurement methods. K2 (2)
- 2) Define the main applications of instrument transformers. K1 (3)
- 3) Explain the resolution impact on the precision of a measurement instrument. K2 (4)
- 4) Explain is a Wheatstone bridge. K2 (6)
- 5) Compare accuracy and precision in measurement. K3 (6)
- 6) Compare the Kelvin bridge and Wheatstone bridge in terms of resistance measurements. K3 (9)
- 7) Analyze the impact of a damaged measurement scale on measurement accuracy. K4 (8)
- 8) Analyze Wheatstone bridge circuit to measure an unknown resistance of 150 ohms. K4 (12)

OR

Analyze a Kelvin bridge setup to measure a low resistance of 10 mOhms. K4 (12)