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School of University Polytechnic

Diploma in Electrical Engineering
Semester End Examination - Nov 2023

Duration : 180 Minutes
Max Marks : 100

Sem V - N1DI501T - Switchgear and ProtectionGeneral 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) How does a single line diagram represent different fault conditions in a power system? K1 (2)
- 2) How are digital relays advantageous over conventional relays in protective schemes? K2 (4)
- 3) Discuss the advancements in isolator and switch technology, and their impact on switchgear efficiency K2 (6)
- 4) Explain the importance of breaker failure protection in switchgear systems. K3 (9)
- 5) Describe the operating principles of induction type overcurrent, directional overcurrent, and differential relays. K3 (9)
- 6) Discuss the essential requirements and terms associated with circuit breakers. K5 (10)
- 7) Discuss the various accessories and protective schemes used in a substation. K4 (12)
- 8) How does differential protection help in detecting faults in feeders? K5 (15)
- 9) Explain the classification and rating of circuit breakers based on their application. K5 (15)
- 10) Discuss the protection schemes used for radial, parallel, and ring feeders. K6 (18)