MODULE : O&M 1

OPERATION AND MAINTENANCE OF TRANSFORMER

COURSE DESCRIPTION:

Introduction

Principle of operation; Vector Group; Two winding and Three winding Transformer; Rectifier Transformer; Parallel
operation and Load Sharing.

Protection

Over load, Over current; Differential; Restricted Earth fault; Buchholz.

Maintenance Test

Routine maintenance testing; IR, PI, Dielectric absorption, High- Pot; tan δ, DC winding resistance, TTR (Transformer turns ratio), Magnetic Balance; Acceptable Values.

Drying of Transformer

Short circuit heating and hot air circulation.

Oil

Definition of terms used in oil characteristic; acceptable values for BDV, tan δ, specific resistance, neutralization value, interfacial tension, gas content, oil filtration techniques – Fuller's earth, Enervac and Valcon system; DGA (Dissolved Gas Analysis), Principle, Roger's method, Limiting value of Hydrocarbon concentrations, Case studies, condition monitoring, recommended test and periodicity.