Government Polytechnic,Kishanganj

Assignment-01

Course: Diploma **Branch- E.E**

Subject Name: E.M&T **Semester: III**

Q.1 The function of oil in a transformer is
(a) to provide insulation and cooling
(b) to provide protection against lightning
(c) to provide protection against short-circuit
(d) to provide lubrication

Q.2 Explain principle of operation of two winding Transformer, also draw the equivalent circuit diagram of a two Winding Transformer.

Q.3 Draw the connection diagram of Y/d/30^0 or Y/d/11 Transformer.

Q.4 The efficiency of a 100 kVA transformer is 0.98 at full as well as at half load. For this transformer at full load the copper loss
(a) is less than core loss
(b) is equal to core loss
(c) is more than core loss
(d) none of the above

Q.5 A 400V/100 V,10 KVA two winding transformer is reconnected as an auto transformer across a suitable voltage source. The maximum rating of such an arrangement could be
(a) 50 kVA (b) 15 kVA (c) 12.5 kVA (d) 8.75 kVA

Q.6 Write the advantage and disadvantage of Auto-transformer.

Q.7 Derive the condition for maximum efficiency in case of single-phase transformer and also find output KVA corresponding to maximum efficiency

Q.8 A 10 kVA,400/200 V, single-phase transformer with a percentage resistance of 3% and percentage reactance of 6% is supplying a current of 50 A to a resistive load. The value of load voltage is

(a) 194 V (b) 390 V (c) 192 V (d) 196 V

Q.9 Draw the equivalent circuit of O.C and S.C Test of single phase transformer and thus determine the equivalent parameters.