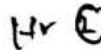


Daffodil International University
Dept. of Electrical and Electronic Engineering
Summer 2026 | 0713-213: Energy Conversion I

CO-02
Full Marks: 15
[8]

29 July 2026

Quiz - 2  

1. A 240/540-V transformer gave the following test results :
O.C Test : 240 V, 1.5 A, 85 W - on low-voltage side.
S. C. Test : 20 V; 10 A, 120 W - with low-voltage winding short-circuited :
Determine the circuit constants, and calculate applied voltage and efficiency when the output is 10.5 A at 540 volt and 0.8 power factor lagging.
2. A 5 kVA, 240/450 V single-phase transformer supplying full-load current at 0.85 [7]
lagging power factor. The O.C./S.C. test results are as follows :
O.C. Test : 240 V, 0.8 A, 75 W – on L.V. side
S.C. Test : 18.5 V, 15 A, 85 W – on H.V. side
Calculate efficiency, secondary voltage (V_2) and current into primary at the above load.