

Lecture 69

1.

A 6 pole lap wound d.c. Generator has 51 slots, each slot has 18 conductors. The useful flux per pole is 35 mwb. Find the generated emf in the armature, if it is driven at a speed of 750 rpm.

SOLUTION :

Given: P = 6 ; Number of slots = 51 ; Conductors/slot = 18 ; ϕ = 35mWb ; N = 750 rpm

Hence,

Total No. of conductors = 51 * 18

Since Lap Wound, A = P

EMF generated = ($\phi ZNP / 60A$) Volts = 401.625 V

PESU