Assignment 7

The due date for submitting this assignment has passed. As per our records you have not submitted this assignment.

1. Considering the fact that 4 pole DC machines of identical armature one is lap wound and the other is wave wound. Then the machine with more generated F.P.A. voltage will be.
   - Lap wound machine
   - Wave wound machine
   - Both have equal generated voltages
   - None of the above
   No, the answer is incorrect.

2. In a DC machines, the conductors which will cause distortion in the main field flux are:
   - Cross magnetizing armature conductors
   - Demagnetizing armature conductors
   - None of the above
   No, the answer is incorrect.

3. The current and voltage ratings of a wave wound DC generator (as compared to a lap wound generator of identical power rating) with more than one pole, f.p.a. per pole will be:
   - Higher, Lower
   - Lower, Higher
   - None of the above
   No, the answer is incorrect.

4. Brushes in DC machines are made up of:
   - Silver
   - Graphite
   - Carbon
   - Cast iron
   No, the answer is incorrect.

5. All pulley wound DC generator has 6 coils with 8 turns per coil. If the machine is operated at 1000 rpm, with flux per pole of 0.006 wb, then the f.p.a. generated will be:
   - 9726 V
   - 380.6 V
   - 38.6 V
   - None of the above
   No, the answer is incorrect.

6. A simple pole wound shunt generator has 300 armature conductors and flux/side of 0.1 Weber. It runs at 1000 rpm. The field and armature resistances are 120 and 0.2 ohm respectively. Find the terminal voltage when it is loaded to take a load current of 100 A. Neglect armature reaction.
   - 473 V
   - 971.4 V
   - 917.4 V
   - 350.2 V
   No, the answer is incorrect.

7. A simple pole wound shunt generator has field and armature resistances of 50 and 0.1 ohm respectively. The no-load voltage is 550 V. Find the terminal voltage when it is loaded to take a load current of 100 A. Neglect armature reaction.
   - 990.2 V
   - 99.44 V
   - 473.2 V
   - 487.2 V
   No, the answer is incorrect.

For questions 8 & 9

A permanent magnet lap wound dc generator has 6 poles, and 432 conductors. The rated current per conductor is 125 A. The no-load terminal voltage at 1600 rpm is 120 V.

8. Calculate the required flux per pole.
   - 0.0054 wb
   - 0.0056 wb
   - 0.0058 wb
   - None of the above
   No, the answer is incorrect.

9. If the machine was wave wound, what would be its generated voltage (under above mentioned conditions).
   - 972.48 V
   - 473.2 V
   - 529.22 V
   - 110.02 V
   No, the answer is incorrect.