**E.G.S PILLAY ENGINEERING COLLEGE, NAGAPATTINAM**

**DEPARTMENT OF CIVIL AND MECHANICAL ENGINEERING**

**ONE HOUR TEST - I**

**Sub Code & Name:** GE6252 & Basic Electrical and Electronics Engg. **Date :**

**Year & Semester :** I & II **Max.Marks :** 30

**Staff Name :** V.Mohan, K.Nandakumar, S.Sivamani. **Time :** 9 am-9.50 am

**ANSWER ALL THE QUESTIONS** 15 X 2 = 30 Marks

1. A 120 Ω resistor has a specified maximum power dissipation of 1 W. Calculate the maximum current level.
2. Three inductive coils each with resistance of 15 Ω and an inductance of 0.03 H are connected in star to a 3 Phase 400V, 50 Hz supply. Calculate the phase voltages.
3. Two resistances of 6 ohm and 8 ohm are connected i) in series ii) in parallel. Find the equivalent resistances.
4. State Kirchhoff‘s Voltage and Current laws.
5. List any three types of indicating instruments.
6. Define form factor and peak factor.
7. State Ohm’s law.
8. Define power factor.
9. Distinguish between a mesh and nodal analysis of a circuit.
10. What is the importance of back EMF in DC motors?
11. A DC shunt generator supplies a load of 10 KW at 220 V. The resistance of armature and shunt field winding is 0.05 Ω and 100 Ω respectively. Calculate the generated voltage.
12. What is the greatest advantage of DC motor?
13. Sketch the circuit diagram for separately excited DC generator.
14. Define current.
15. Define frequency.