**Centurion University of Technology and Management, Paralakhemundi**

**Sub- Cable system & Testing (CUEG 2093) (Domain)**

**Assignment 2**

1. A three-phase power cable has a resistance of 0.2 ohms per phase. If the cable carries a balanced load of 200 amps per phase at a power factor of 0.9 leading, what is the total power loss in the cable?
2. A power cable has a resistance of 0.1 ohms and a reactance of 0.05 ohms. If the cable carries a current of 100 amps at a power factor of 1, what is the total power loss in the cable?
3. A power cable has a resistance of 0.01 ohms per kilometer and a length of 20 kilometers. If the cable carries a current of 500 amps, what is the power loss in the cable?
4. A power cable has a resistance of 0.05 ohms per kilometer and a length of 2 kilometers. If the cable carries a current of 200 amps, what is the voltage drop across the cable?
5. A power cable has a resistance of 0.2 ohms per kilometer and a length of 5 kilometers. If the cable carries a current of 500 amps, what is the voltage drop across the cable?
6. A three-phase power cable has a resistance of 0.05 ohms per phase and a reactance of 0.1 ohms per phase. If the cable carries a balanced load of 100 amps per phase at a power factor of 0.8 lagging, what is the total power loss in the cable?
7. A power cable has a resistance of 0.1 ohms and a reactance of 0.05 ohms. If the cable carries a current of 50 amps at a power factor of 0.9 leading, what is the total power loss in the cable?
8. A power cable has a resistance of 0.2 ohms and a length of 50 meters. If the current flowing through the cable is 200 amps, what is the power loss in the cable?