**Assignment 2**

1. A 220V/110V, 500VA single-phase transformer has a turns ratio of 2:1. What is the primary current when the secondary is delivering full load current?

2. A 100kVA, 480V/240V, 60Hz transformer has an equivalent resistance of 0.5% and equivalent reactance of 2.5%. Calculate the regulation of the transformer at full load.

3. A 75kVA, 480V/240V, 60Hz transformer has a primary resistance of 0.6% and a secondary resistance of 0.3%. Calculate the efficiency of the transformer at full load.

4. A 500kVA, 480V/240V, 60Hz, three-phase transformer has an impedance of 5 + j20 ohms per phase. What is the voltage regulation at full load and 0.8 power factor lagging?

5. A 200kVA, 480V/240V, 60Hz transformer has a primary resistance of 0.8% and a secondary resistance of 0.4%. Calculate the maximum efficiency of the transformer.

6. A 50kVA, 2400/240V, 60Hz transformer has a turns ratio of 10:1. Calculate the primary current when the secondary is delivering 200A.

7. A 100kVA, 2200/440V, 60Hz transformer has a turns ratio of 5:1. What is the primary voltage when the secondary is delivering 200A?

8. A 500kVA, 480V/240V, 60Hz, three-phase transformer has an impedance of 6 + j24 ohms per phase. What is the copper loss in the transformer at full load and unity power factor?