ET 350 Name:
Quiz 1

1. Find the total current in circuit shown in Fig. 1.

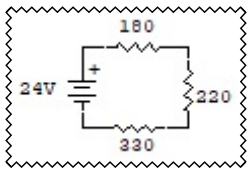

Fig. 1

2. Find the total current in the circuit shown in Fig. 2.

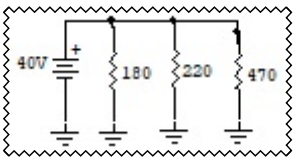

Fig. 2

3. The magnetic circuit in Fig. 3 draws 3A from the power supply and the coil has 200 turns; find the magnetomotive force.

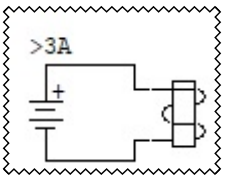

Fig. 3

4. The coil in Fig. 4 has a cross sectional area of 0.004m^2 and produces a flux of 300uWb; find the flux density.

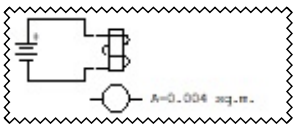

Fig. 4

5. An AC signal has a peak to peak value of 200 mV; find its rms value.

6. An AC signal is observed on the oscilloscope and has a period of 2.5 ms; find the frequency of this signal.

7. What is the meaning of ELI?

8. Calculate the inductive reactance of the circuit in Fig. 6.

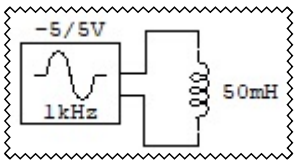

Fig. 6

9. Find the total capacitance of the circuit in Fig. 7.

Fig. 7

10. Calculate the capacitive reactance of the circuit in Fig. 8.

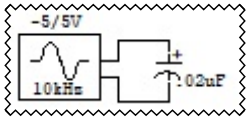

Fig. 8

11. A transformer has 1000 turns on the primary and 75 turns on the secondary. What is the turns ratio of this transformer?

12. A transformer has 120V on the primary, 24V on the secondary and secondary current is 40mA; find the primary current.

13. A transformer has a secondary which is showing a no-load voltage of 24V, but when loaded, the voltage drops to 20V; find the percentage voltage regulation.

14. If a certain D.C. motor has a starting current of 600 mA; what will be the “locked rotor” current?