

**Lesson 5 – QUESTIONS**

- Q1 Explain Fleming’s left and right hand rules.
- Q2. If the peak voltage of a sine wave is 12 V, what is the RMS and average values?  
 A. 8.48 A and 7.6 A  
 B. 7.6 V and 8.48 V  
 C. 7.6 A and 8.48A  
 D. 8.48 V and 7.6 V
- Q3. What is the instantaneous voltage at  $33^\circ$  of a sine wave with a peak-to-peak of 100 V?  
 A. 54.46 V  
 B. 27.23 V  
 C. 3.3 V  
 D. 33.3 V
- Q4. A sine wave has a RMS value of 17.65 V. What is the peak, P to P and average value?  
 A. 50 V, 100 V and 31.8 V  
 B. 25 V, 50 V and 15.9 V  
 C. 50 V, 25 V and 6.37 V  
 D. Cannot be calculated.
- Q 5. What is the period and wavelength of a signal at 144 MHz?  
 A. 6.9 nS & 2metres  
 B. 69 nS & 2metres  
 C. 0.69 nS & 2metres  
 D. 0.069 nS & 2metres
- Q6 A signal has a period of 2 mS, what is the frequency and wavelength?  
 A. 500 Hz & 600 kM  
 B. 50 Hz & 600,000 M  
 C. 5000 Hz & 600 kM  
 D. 500 Hz & 60 kM
- Q7 what is the third harmonic of 1 kHz?  
 A. 3 kHz  
 B. 4 kHz  
 C. 8 kHz  
 D. 1 kHz
- Q8 If one wave is 90° out of phase with another wave, what does this mean?
- Q9 What is the classification of the following signals.

Frequency	Classification
350 MHz	
33 MHz	
33 kHz	

Q10. Can a transformer have more than one winding in the secondary?

Yes

No

Give reasons for answer.

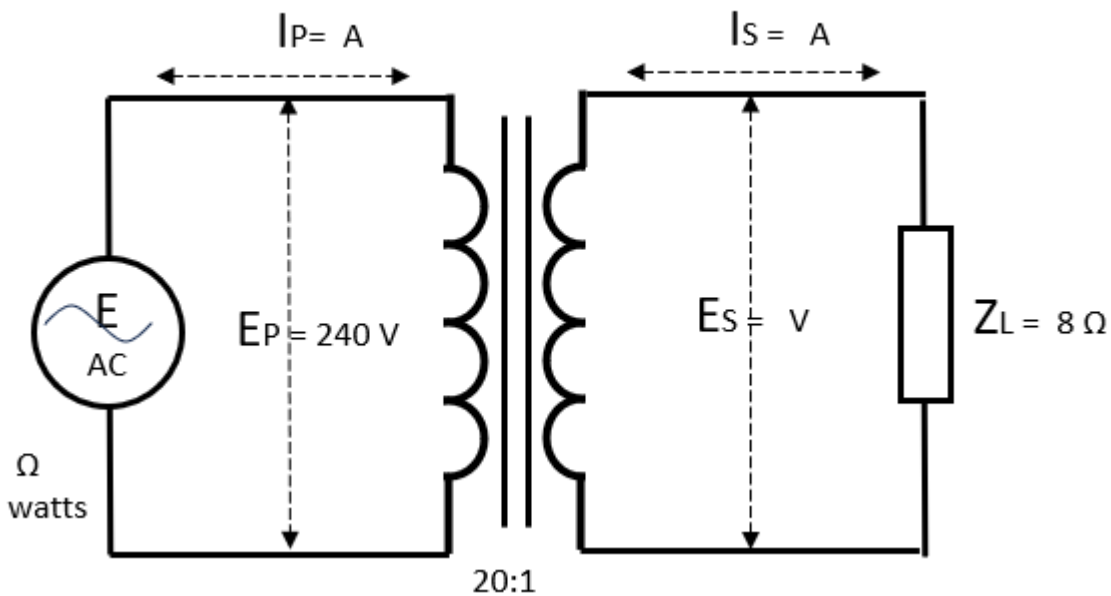
Q11 Why would a transformer have the same number of windings on the primary as the secondary?

- A. Need to use the copper.
- B. Want a DC supply.
- C. Need to isolate circuits.
- D. Makes a good heater.

Q 12. Need a 48 V AC supply from a 240 V supply. What is the winding ratio?

- A. 2:1
- B. 5:1
- C. 1:5
- D. 1:2

Q 13 Complete the missing details,

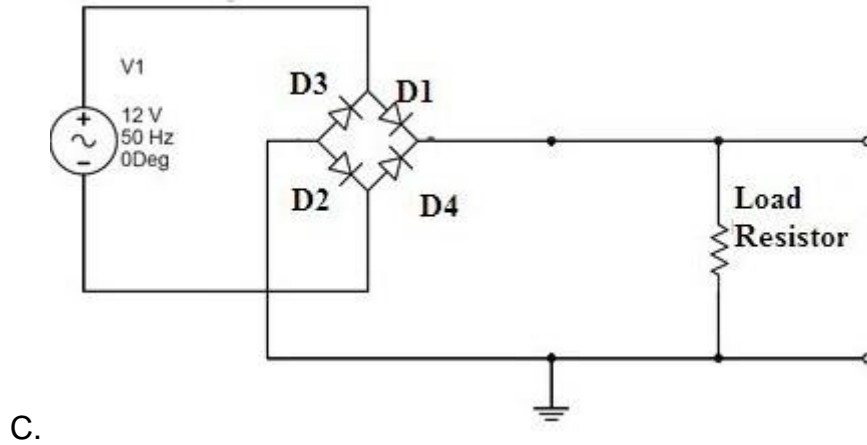
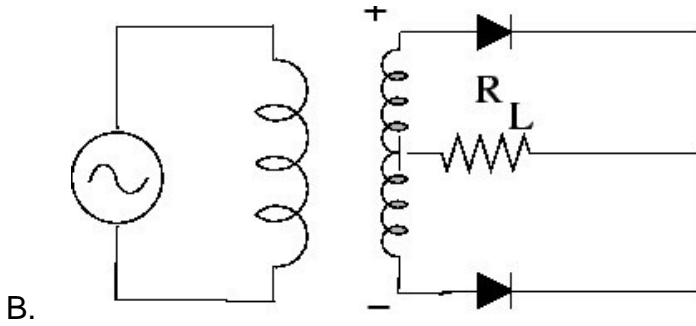
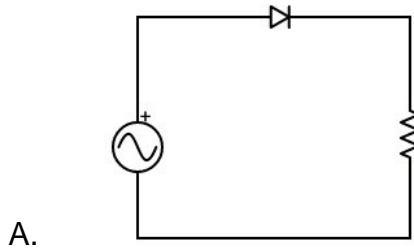


Q14 Draw in the lines of force and direction on the magnet below.



Q15 Name and describe the four primary modulation methods used in amateur radio.

Q16 Describe the operation and purpose of the following circuits. What would the output across the load look like with these circuits?



Q17 What is Peak Inverse Voltage (PIV) and how does it apply to the circuits above?

