COLLEGE OF ENGINEERING & TECHNOLOGY

Department : Electrical & Control Engineering
Lecturer : Dr. Hussein El Desouki
Course : Electric Engineering (1)
Course Code : EE 236 **Marks:** 40
Date : 17 / 1 / 2016 **Time** : 2 hour

Final Exam

Answer the following questions:-

Question 1:

Find the power dissipated in the 5Ω shown in figure 1, using node voltage method OR mesh current method.

8 Marks
(A1, A5, B13)

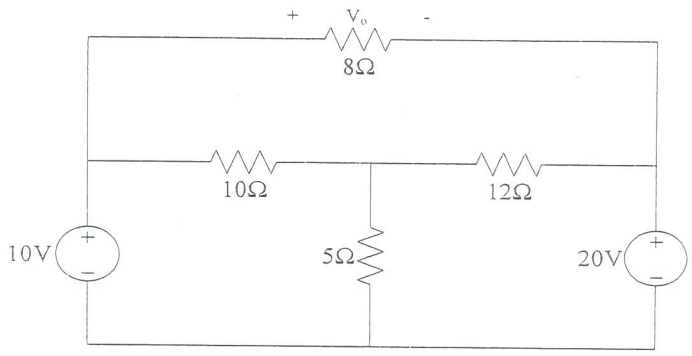

Figure 1

Question 2:

I. Define the following terms:

a) Magnetic flux (Ø).
b) Magnetic permeability (μ).
c) Magnetic field intensity (H).

8 Marks
(A1, A5, B7)

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Lecturer:	H. Desouki	31/1/2016
Course Coordinator :	Sofy	31/1/2016
Head of Department:	Hmoud	31/1/2016

II. Find the current I required shown in figure 2 to establish a flux $\Phi = 4 \times 10^{-4}$ Wb in the magnetic circuit:

Area (throughout) = $2 \times 10^{-4}\ m^2$.

N = 100 Turns.

$l_{ab} = l_{cd} = 0.05$ m.

$l_{ad} = l_{bc} = 0.02$ m.

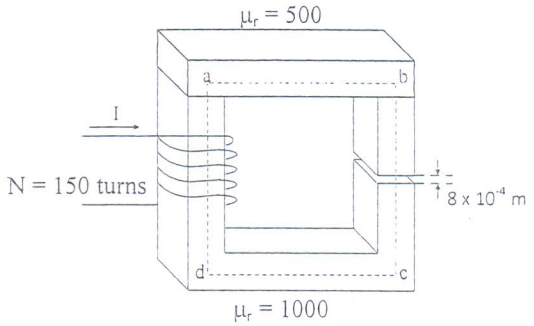

Figure 2

Question 3:

Find the average and the RMS for the waveform shown in figure 3:

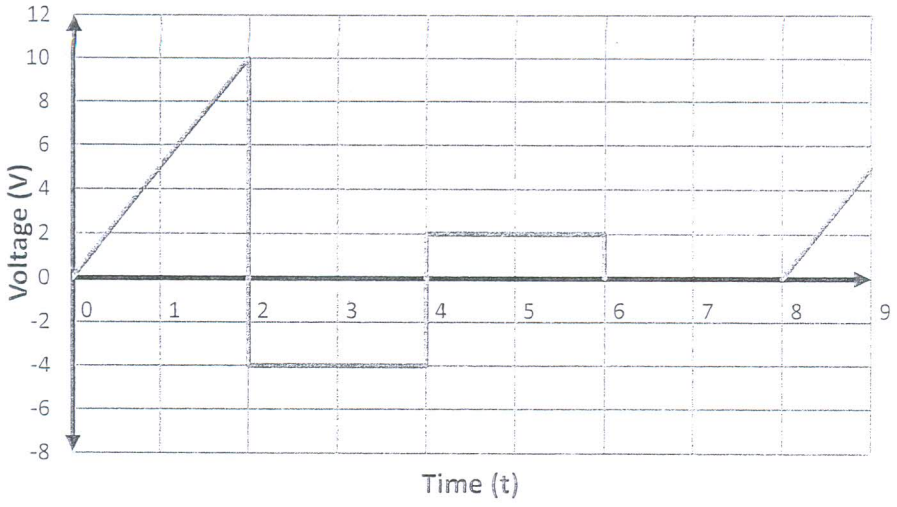

Figure 3

8 Marks
(A1, A5, C1, C6)

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