تم تحميل هذا الملف من موقع المناهج الإماراتية

أسئلة الامتحان النهائي الالكتروني والورقي

تاريخ إضافة الملف على موقع المناهج: 2024-05-19 09:36:55

إعداد: عبد الرحمن عصام

التواصل الاجتماعي بحسب الصف الثاني عشر المتقدم

اضغط هنا للحصول على جميع روابط "الصف الثاني عشر المتقدم"

روابط مواد الصف الثاني عشر المتقدم على تلغرام

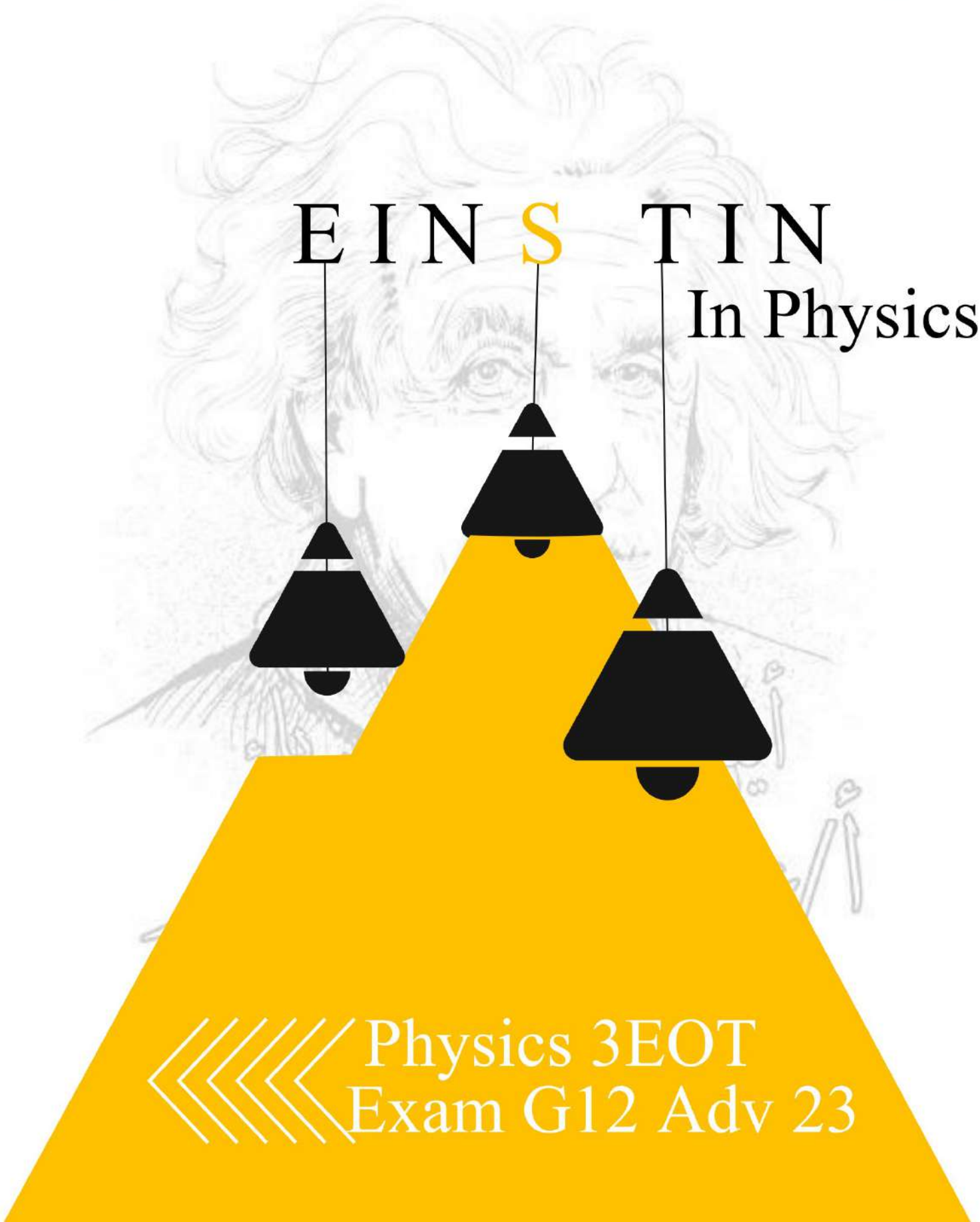
التربية الاسلامية	اللغة العربية	اللغة الانجليزية	الرياضيات

المزيد من الملفات بحسب الصف الثاني عشر المتقدم والمادة فيزياء في الفصل الثالث

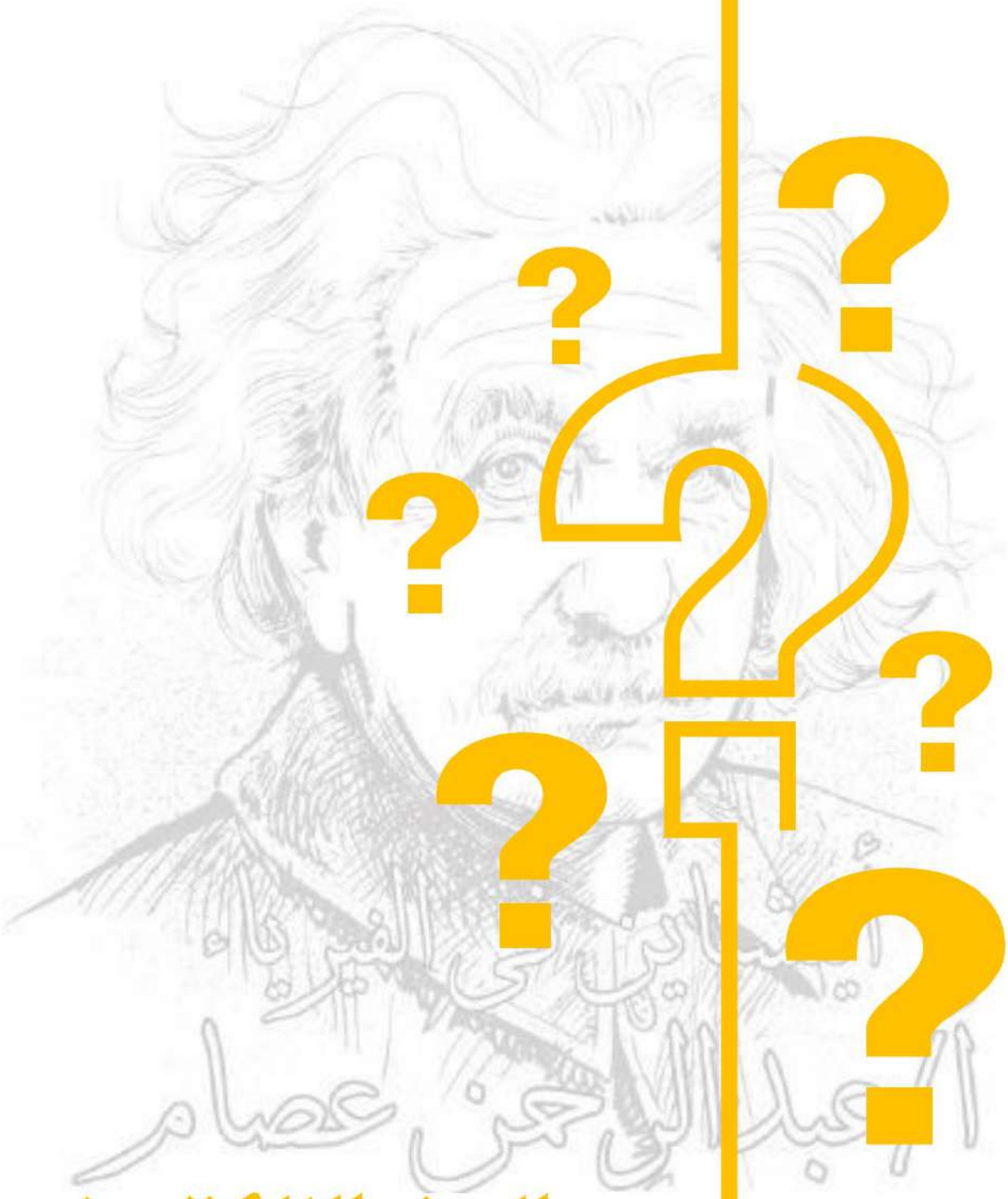
1	أسئلة اختبار دوري في الدروس الثلاثة الأولى من الوحدة التاسعة
2	ملزمة الوحدة العاشرة دارات التيار المتناوب مع تدريبات
3	الدروس المحذوفة من مقرر الفيزياء
4	أسئلة الاختبار التكويني الأول الوحدة التاسعة الحث الكهرومغناطيسي

المزيد من الملفات بحسب الصف الثاني عشر المتقدم والمادة فيزياء في الفصل الثالث	
5	الدروس المطلوبة في الفصل الثالث

اسم الطالب: .....



PART _1



الجزء الالكتروني

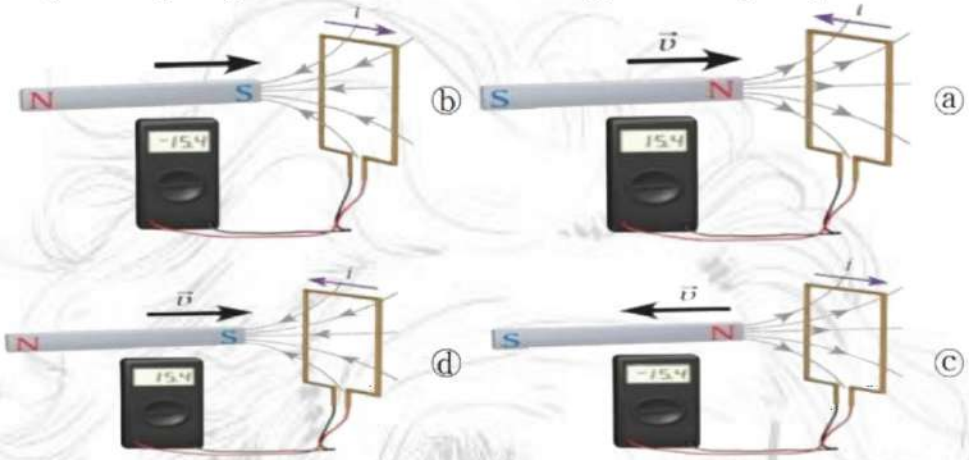
2022 – 2023

أ/ عبدالرحمن عصام
0509886279

MULTIPLE-CHOICE QUESTIONS :

Faraday's Experiments :

1. Which of the following diagram is not correct according to Faraday's experiments?



Magnetic_flux

2. According to the figure, at which (θ) the magnetic flux equals approximately to (0.8AB)?

ⓐ *90* ⓑ 37 ⓒ 53 ⓓ 74

Induced potential difference

3. When can we use the following equation to find the induced potential difference?

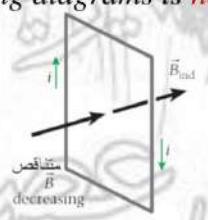
$$\Delta V_{ind} = -B\cos\theta\frac{dA}{dt}$$

ⓐ *A and B are constant* ⓑ *A, B, and θ are constant* ⓒ *θ and B are constant* ⓓ *A and θ are constant*

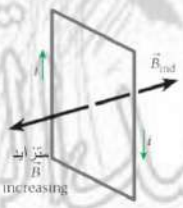
lenz's law

4. Which of the following diagrams is not correct according to Lenz's Law?

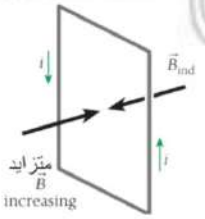
ⓐ



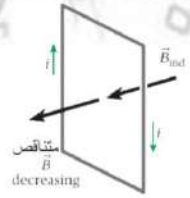
ⓒ



ⓑ

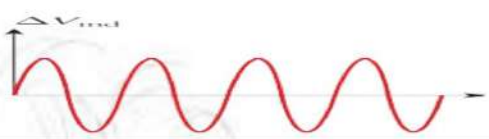


ⓓ



Induced potential difference as a function of time for a generator

5. The figure shows two graphs representing the induced potential difference as a function of time for two generators. Which of the following rows indicates the correct type of generator under each graph?

	Figure (a)	Figure (b)
		
A.	a simple direct-current generator	a simple alternating-current generator
B.	a simple alternating-current generator	a simple direct-current generator
C.	a simple alternating-current generator	a simple alternating-current generator
D.	a simple direct-current generator	a simple direct-current generator

Generator and Motors

6. Which of the following is correct about the generator and motors?

ⓐ *The motors transform kinetic energy into electric energy*

ⓑ *Generators and motors are not applications of electromagnetic induction*

ⓒ *Generator that produce alternating voltages and the resulting alternating current is also called an alternators*

ⓓ *Generators contain loops in a magnetic field but motors do not contain loops in a magnetic field*

Induced Electric Field

7. For a positive charge moving in a circular path in an electric field, the work done can be expressed as ($W=2\pi rxE$). What does x represent?

ⓐ *The radius of the circular path* ⓑ *Induced electric field* ⓒ *The magnitude of the charge* ⓓ *Induced electric current*

Self-Induction

8. Which of the following is not a unit of inductance (L)?

ⓐ $\frac{Tm^2}{A}$ ⓑ H ⓒ $\frac{V.A}{S}$ ⓓ $\frac{V.S}{A}$

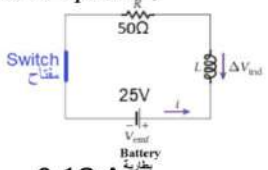
Magnetic flux

9. Which of the following is not correct unit of magnetic flux?

ⓐ $H.A$ ⓑ $T.m^2$ ⓒ $V.s$ ⓓ $H.A/s$

RL circuit

10. According to the figure that shows closed circuit for a long time, if the circuit is opened, what is the current in the circuit when time is equal to the time constant (from the moment the circuit is opened)?



ⓐ **0.32 A** ⓑ **0.70 A** ⓒ **0.15 A** ⓓ **0.18 A**

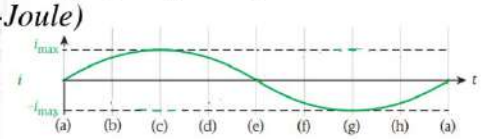
Constant (τ) in RL circuit

11. Which of the following is wrong regarding the time constant (T) in RL circuit?

ⓐ *The time constant increases as the resistance decreases*
ⓑ *The time constant decreases as the resistance increases*
ⓒ *The time constant decreases as the inductance increases*
ⓓ *The time constant decreases as the inductance decreases*

LC Circuits

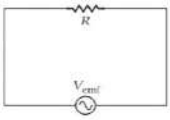
12. The figure shows the variation of current as a function of time for a simple, single-loop LC circuit. If the maximum value of magnetic energy is (16.0milli-Joule) what is the magnetic energy at time (g)?



ⓐ ***256 milli-Joule*** ⓑ ***-4.0 milli-Joule*** ⓒ ***+4.0 milli-Joule*** ⓓ ***+16.0 milli-Joule***

Alternating current circuit

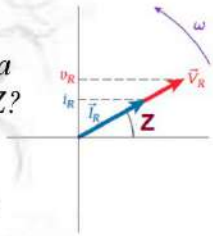
13. What is the phase difference between the current and the voltage in a single-loop circuit with a resistor and a source of time-varying electro-motive force emf?



ⓐ $0\ \pi$ ⓑ $\frac{\pi}{2}$ ⓒ $-\frac{\pi}{2}$ ⓓ $-\pi$

Single-loop circuit with a resistor and a source of time-varying emf

14. The figure shows voltage and current phasors for a single-loop circuit containing a source of time-varying emf and a resistor. Which of the following expresses angle Z?



ⓐ T ⓑ ω^2 ⓒ ωt ⓓ ω

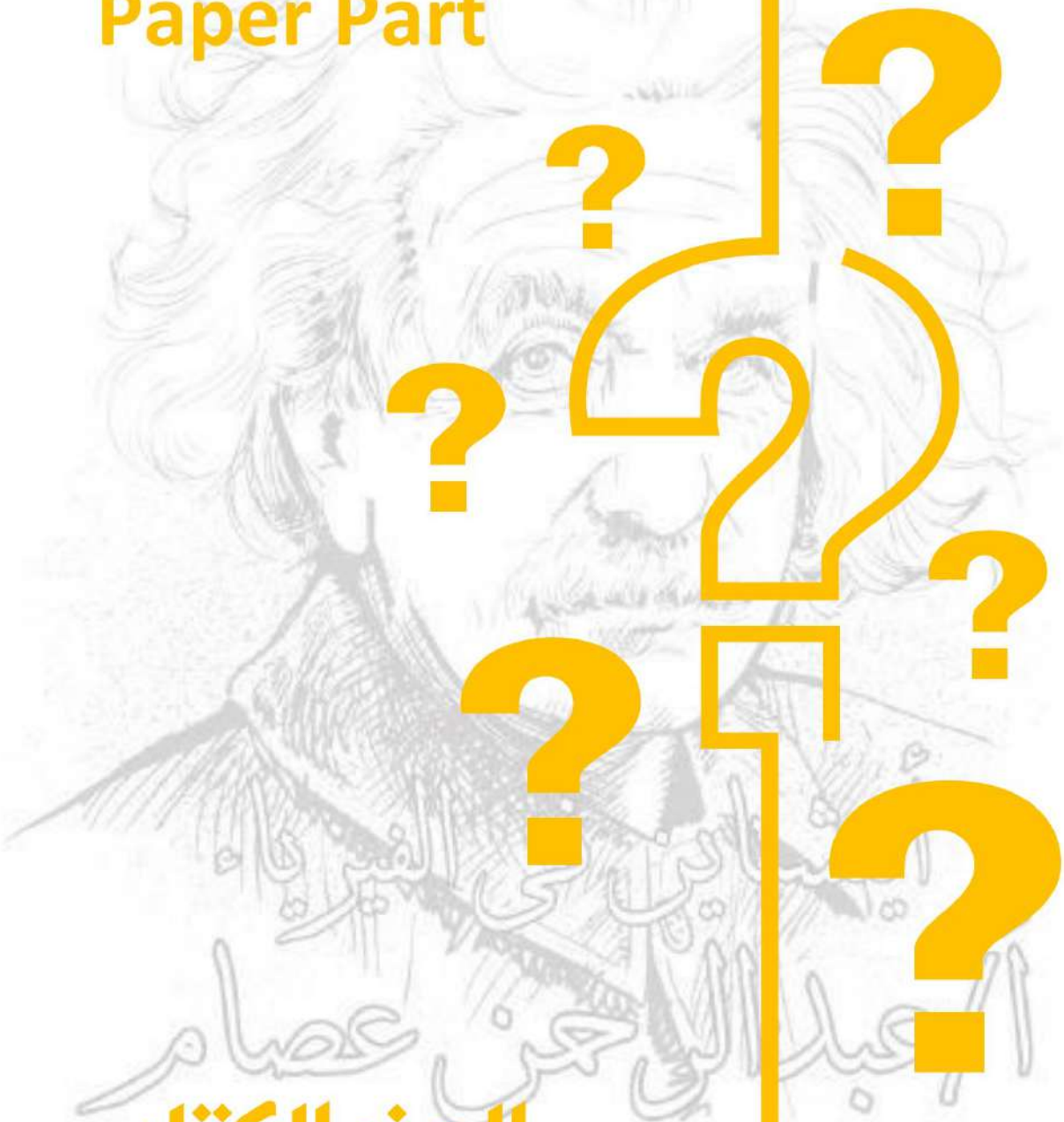
Power dissipated in a transmission line

15. Consider a power plant that produces (360MW) of power. If the power is transmitted at (300kV), and the total resistance of the power lines is (60Ω), what is the power lost in the transmission lines?

ⓐ ***86.4MW*** ⓑ ***72.0kW*** ⓒ ***24.0MW*** ⓓ ***1.20kW***

PART _2

Paper Part



الجزء الكتابي

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أ/ عبدالرحمن عصام
0509886279

1. *A solenoid's inductance is equal to (3.0×10^{-3} H). Suppose that the length of the solenoid is increased to be three times its original length, and the average cross-section radius is reduced to be one fifth of its original radius, while the number of turns reunchanged. Calculate the new inductance*

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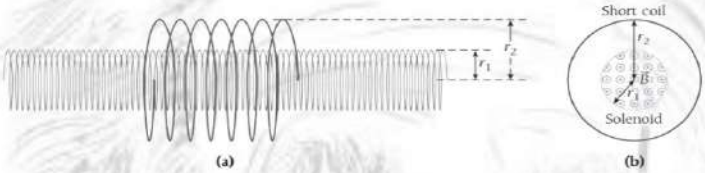
2. *A long solenoid with a circular cross section of radius (r_1=0.05m) and (n-800turns/m) is inside and coaxial with a short coil that has a circular cross section of radius (r_2 =0.10m) and (N=7turns). While the current in the long solenoid is increased steadily from (0.003A) to / over (0.6millisecond), the potential difference induced in the short coil is (-0.4V).*

Calculate the current I



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3. *A long solenoid has a circular cross section of radius (9.0cm), and length (17.0cm). The number of turns in one meter for the solenoid is (3.2×10^3) and it carries a current (0.5A). Calculate the magnetic energy stored in the solenoid.*

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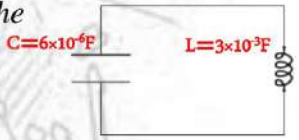
1. *The figure shows an oscillating LC circuit. The maximum charge on the capacitor is (9.0μC).*



a. *find the energy stored in the magnetic field of the inductor*

4. *when the charge of the capacitor is maximum.*

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b. *Calculate the energy stored in the electric field of the capacitor*

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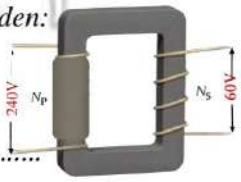
According to the figure below, the number of the primary coil turns Np in the transformer is hidden:

5. *Find the number of turns Np.*



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Einstein Abdelrahman Esam