

تم تحميل هذا الملف من موقع المناهج الإماراتية



نموذج اختبار تجريبي وفق الهيكل الوزاري القسم الورقي الخطة (M+A)102

موقع المناهج ← المناهج الإماراتية ← الصف الثاني عشر المتقدم ← علوم ← الفصل الثاني ← اختبارات ← الملف

تاريخ إضافة الملف على موقع المناهج: 12:40:23 2025-03-09

ملفات اكتب للمعلم اكتب للطالب | اختبارات الكترونية | اختبارات | حلول | عروض بوربوينت | أوراق عمل
منهج انجليزي | ملخصات وتقارير | مذكرات وبنوك | الامتحان النهائي للمدرس

المزيد من مادة
علوم:

التواصل الاجتماعي بحسب الصف الثاني عشر المتقدم



الرياضيات



اللغة الانجليزية



اللغة العربية



التربية الاسلامية



المواد على تلغرام

صفحة المناهج
الإماراتية على
فيسبوك

المزيد من الملفات بحسب الصف الثاني عشر المتقدم والمادة علوم في الفصل الثاني

مذكرة في التكاثر الخلوي

1

أوراق عمل درس التكاثر الخلوي

2

دليل المعلم وحدة جهاز المناعة

3

ملزمة وأسئلة تدريبية حول جهاز المناعة

4

البناء الضوئي والتنفس الخلوي

5

PHYSICS



ثاني عشر متقدم $m102$
الفصل الثاني

استاذ عبد الرحمن عصام

الله الحاسبة مسموح

العلامة المكتسبة /100

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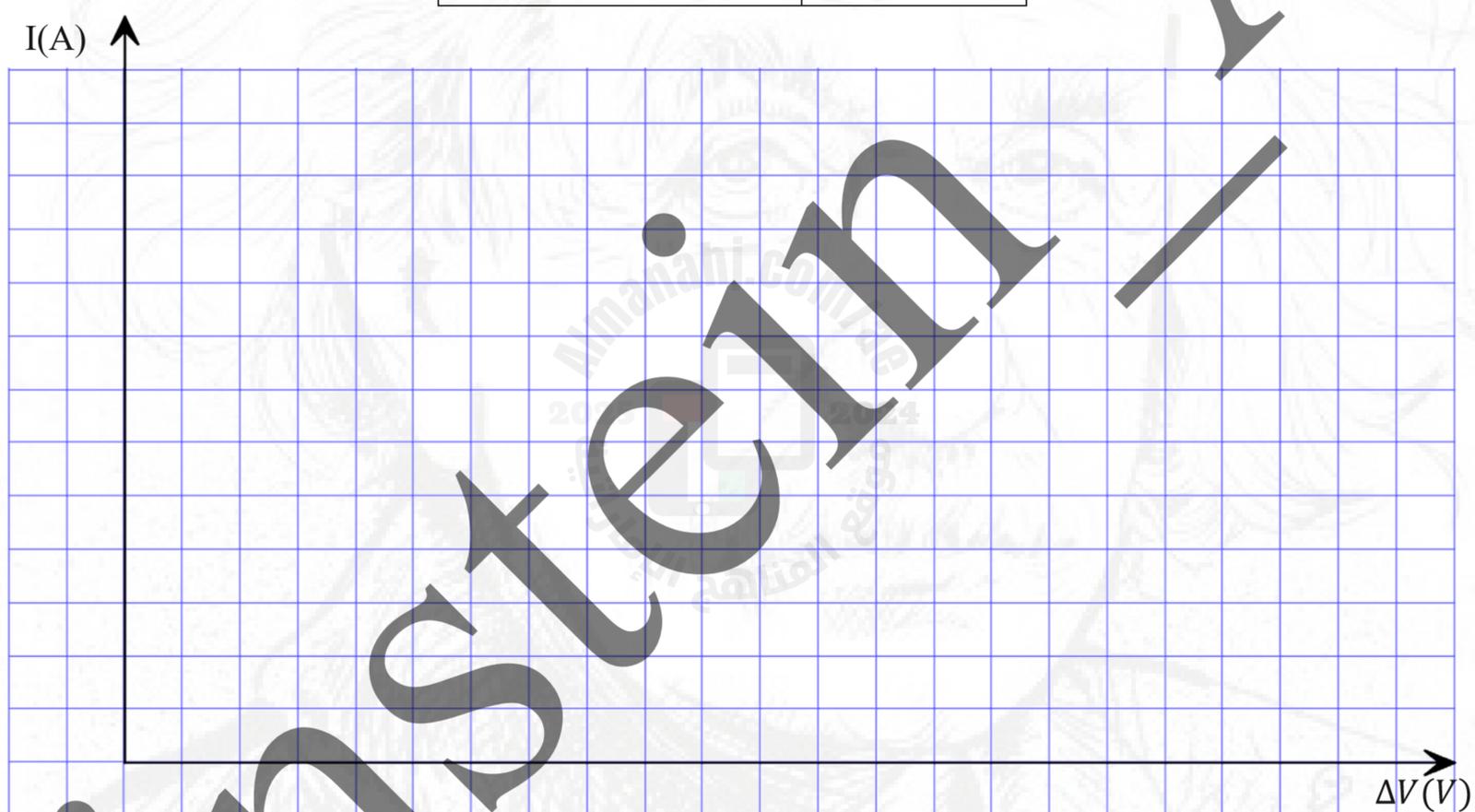
Einstein_AE



A group of students did an experiment to determine the relationship between the changes in current in an electrical resistor and the change in the potential difference between its terminals in a circuit .The following table shows the data obtained by the group.

Graphically represent the relationship between potential difference and electric current.

Potential Difference (V) (V) فرق الجهد (V)	Current (A) شدة التيار (A)
0	0
0.50	0.040
1.00	0.060
1.50	0.075
2.00	0.085
2.50	0.095
3.00	0.105



B-Is the wire **ohmic** resistor? Explain your answer.

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C-Refer to your graph in section A, calculate the **resistance** of the wire from the graph. when A current of (0.080A).

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The figure represents a circuit. Calculate **the equivalent resistance** in the circuit.

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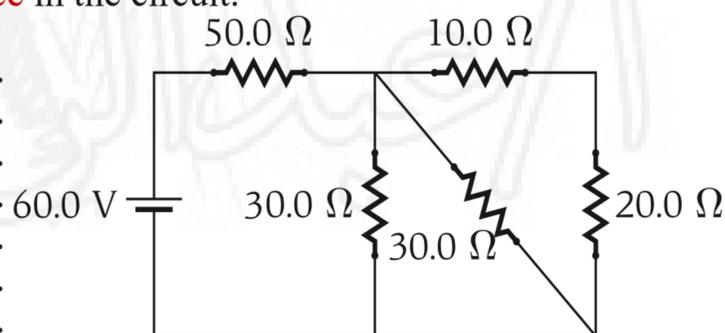
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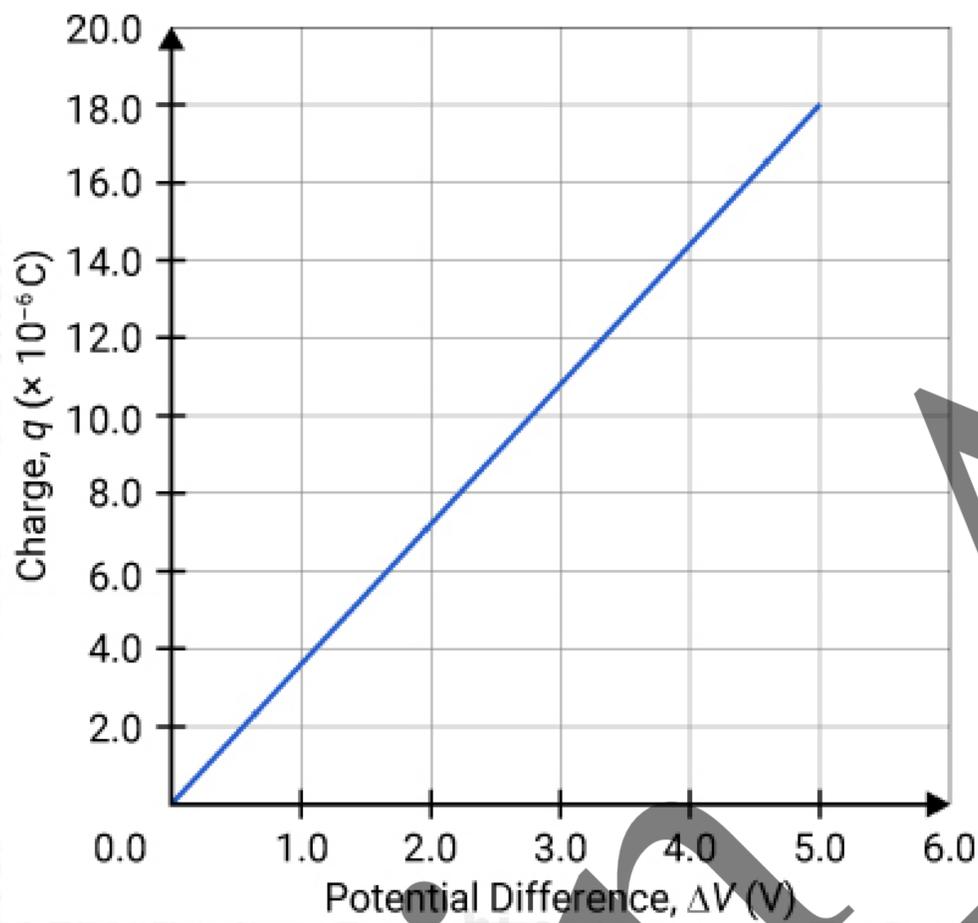
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A parallel plane capacitor with a plate area (2mm^2) is connected to a battery, Fig shows the potential difference between the two plates of the capacitor as its charge changes during the charging process of the capacitor.



What is the **capacitance** of the capacitor.

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What is the **distance** (d) between the plates of the capacitor

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What is the change in the **electrical potential energy** stored in the capacitor when the voltage between its plate's changes from 3V to 4.5 V

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If the experiment is replicated, but the distance between the plates is doubled, **plot** on the same graph the relationship between the capacitor's charge and its voltage

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A parallel-plate capacitor has a capacity of $(6.4 \times 10^{-12} F)$ and a distance between its plates of $(4.0 \times 10^{-3} m)$. Calculate The **area** of the plates of the capacitor

Charge one of the plates when connected to a 12V battery.

After the capacitor is fully charged, it is disconnected from the battery and the two plates are moved closer together, what **happens** to

Capacitor charge	Capacitance of the capacitor	Voltage of the capacitor

1. If the equation between charge and time is $q = 3t^3 - 5t + 4$ in (mA).

What is the **current** (i) at (t=5s)?

- (a) 9 mA (b) 18 mA (c) 25 mA (d) 220 mA

2. Two wires X and Y, X with cross-sectional radius equal to $5.0 \times 10^{-5} m$ and Y with cross-sectional radius equal to $(3.0 \times 10^{-5} m)$. If the two wires are carrying the same current. Which of the following is **correct** about the current density J in the wires?

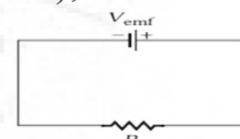
- (a) $J_x = \frac{5J_y}{3}$ (b) $J_x = \frac{9J_y}{25}$ (c) $J_x = \frac{25J_y}{9}$ (d) $J_x = \frac{3J_y}{5}$

3. Which of the following is **wrong** regarding the specific resistance and resistivity of a wire?

- (a) Resistivity is inversely proportional to conductivity (b) The resistance of a wire is directly proportional to its cross-sectional area
 (c) The resistance of the wire is directly proportional to its length (d) Resistivity of the wire depends on the type of Its material

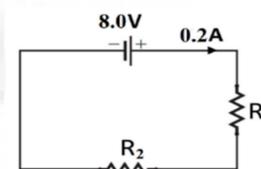
4. For the electric circuit shown in the figure: if the battery's electromotive force is (12V), the resistance is ($R=2.4\Omega$), what is the electric **current** flowing through the circuit?

- (a) 2A (b) 28.8A (c) 0.2A (d) 5A



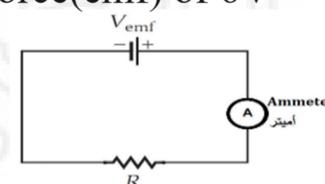
5. The figure shows two resistors connected to a battery. If ($R_2 = 3R_1$), What is the **resistance** R2?

- (a) 50Ω (b) 10Ω (c) 40Ω (d) 30Ω



6. The figure shows a simple electric circuit. The battery is with an electromotive force(emf) of 6V and internal resistance of 0.3Ω . The resistance of the resistor R if the **reading** of the **ammeter** 4A What is The resistance of the resistor R?

- (a) 0.3Ω (b) 2.3Ω (c) 5Ω (d) 1.2Ω



7. Three resistors ($R, 2R, 3R$) are connected in parallel.
What is the **equivalent** resistance of the three resistors?

- (a) $\frac{11}{6R}$ (b) $\frac{6}{11R}$ (c) $\frac{11}{6}R$ (d) $\frac{6}{11}R$

8. An electric device with power of (2400 W) has a resistance of (5.0Ω)
What is **the potential difference** needed to operate the device?

- (a) 220V (b) 12000V (c) 55.0V (d) 110V

9. A capacitor stores charge Q at a potential difference ΔV . What happens when the voltage applied to the capacitor by a battery is doubled to $2\Delta V$?

- (a) The capacitance falls to half its initial value, and the charge remains the same
(b) The capacitance and the charge both fall to half their initial values
(c) The capacitance and the charge both double
(d) The capacitance remains the same, and the charge doubles

Or 9. A parallel-plate capacitor stores 240 nC when fully charged by the application of a 12 V potential difference across its plates. What is its **capacitance**?

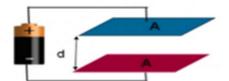
- (a) $2.9 \times 10^{-6}\text{ F}$ (b) $5.0 \times 10^{-11}\text{ F}$ (c) $1.7 \times 10^{-9}\text{ F}$ (d) $2.0 \times 10^{-8}\text{ F}$

10. Which of the following **symbols** represents inductor?

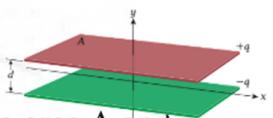
- (a)  (b)  (c)  (d) 

11. According to the parallel plate capacitor in the figure. If the two plates are the same in area, and the width of the blue plate is 12 cm , its length is 16 cm , and the distance between the two plates is 15 cm ,

What is **the electric capacitance** of the capacitor?



- (a) $1.13 \times 10^{-12}\text{ F}$ (b) $8.85 \times 10^{-12}\text{ F}$ (c) $1.70 \times 10^{-13}\text{ F}$ (d) $1.13 \times 10^2\text{ F}$

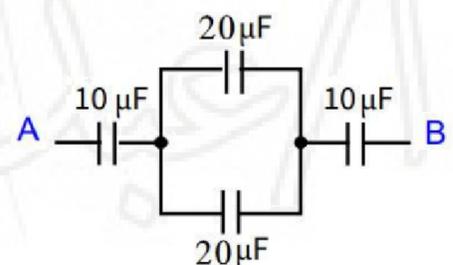


Q 11. According to the figure, a parallel plate capacitor in vacuum consists of two conducting plates, each having area A and opposite charges, separated by a distance d . If the electric potential difference between the two plates of the capacitor is (8.0 V). What is the **electric potential difference** between the two plates, when the distance between them is equal to ($2d$)?

- (a) 8.0V (b) 16.0V (c) 4.0V (d) 2.0V

12. What is the equivalent capacitance between A & B in the figure?

- (a) $40\mu\text{F}$ (b) $30\mu\text{F}$
(c) $4.44\mu\text{F}$ (d) $3.33\mu\text{F}$

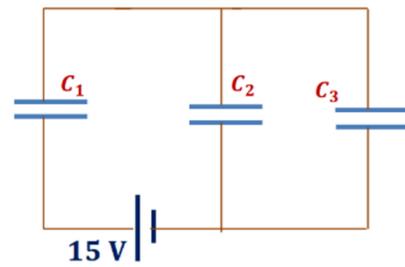


13. In circuit shown:

$$C_1 = 8.0 \mu F, C_2 = 7.0 \mu F \text{ and } C_3 = 12 \mu F$$

What is the **potential difference** across C_2

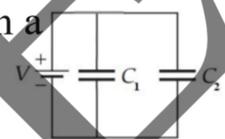
- (a) $4.4V$ (b) $15V$
(c) $10.5V$ (d) $5.62V$



14. Two parallel plate capacitors with capacitance C_1 and C_2 are connected in parallel with a battery as shown in the figure. If $C_2 = 2C_1$ and the energy stored in C_1 is U

What is the energy stored in C_2 ?

- (a) $2U$ (b) $4U$ (c) $U/2$ (d) $U/4$



15. Suppose you charge a parallel plate capacitor with a dielectric between the plates using a battery and then remove the battery, isolating the capacitor and leaving it charged.

You then remove the dielectric from between the plates.

The **potential difference** between the plates will

- (a) Increase (b) Decrease (c) Stay the same (d) Become zero

or 15. The space between the plates of an isolated parallel plate capacitor is filled with air. The magnitude of the charge Q on each plate is kept constant. If the capacitor is filled with a slab of dielectric material, what happens to **the electric field** inside the capacitor?

- (a) Increase (b) Decrease (c) Stay the same (d) Become zero

Or 15. The space between the plates of an isolated parallel plate capacitor is filled with a slab of dielectric material. The magnitude of the charge Q on each plate is kept constant. If the capacitor is filled with a slab of dielectric material what happens to **the energy** stored in the capacitor

- (a) Increase (b) Decrease (c) Stay the same (d) Become zero

والله ولي التوفيق

مع اطيب التمنيات بالتوفيق والنجاح

اينشتاين عبدالرحمن عصام