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1. A parallel plate capacitor is charged by a battery. If the battery is then disconnected and the spacing between the plates is decreased. What happens to the charge and energy stored on the capacitor?
- A) Both the charge and the energy remain constant.
B) The charge remains constant and the energy increases.
C) The charge remains constant and the energy decreases.
D) Both the charge and the energy increase.
E) Both the charge and the energy decrease.
2. A capacitor has a capacitance of 4.0×10^{-4} F. If it is charged to a potential difference of 300 volts, the amount of energy stored in it is most nearly
- A) 0.0036 J
B) 0.03 J
C) 0.06 J
D) 9 J
E) 18 J
3. How much work is required to charge a 40 mF capacitor to a potential difference of 200 V?
- A) 0.8 J
B) 1.6 J
C) 80 J
D) 160 J
E) 800 J
4. A $10 \mu\text{F}$ capacitor is charged to a potential difference of 200 kV in 20 s. What is the average power delivered to the capacitor in this time?
- A) 100 W
B) 200 W
C) 10 kW
D) 20 kW
E) 40 kW
5. A capacitor is charged to a potential of 400 V and stores a charge of 2 mC in 5 s. What is the average power delivered to the capacitor in this time?
- A) 0.08 W
B) 0.16 W
C) 10 W
D) 32 W
E) 80 W
6. A $10 \mu\text{F}$ capacitor is charged to a potential difference of 20 V. The electric energy stored in the capacitor is
- A) 2×10^{-5} J
B) 2×10^{-4} J
C) 4×10^{-4} J
D) 2×10^{-3} J
E) 4×10^{-3} J
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Answer Key
E Fields in between Plates MC Questions [Mar 28, 2011]

1. B
 2. E
 3. E
 4. C
 5. A
 6. D
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Name _____

Class _____

Date _____

1. _____

2. _____

3. _____

4. _____

5. _____

6. _____