

Worksheet: Electrostatic Potential and Capacitance

IB · Class 12 · Physics · 5 questions · 14 marks

Name: _____

Date: _____

Score: _____ / 14

Q1. Charges 2 μC and $-2 \mu\text{C}$ are 0.1 m apart. Find the potential at the midpoint. *[2 marks]*

Q2. A parallel plate capacitor has area 0.1 m^2 and separation 1 mm. Find its capacitance. *[2 marks]*

Q3. Find the equivalent capacitance of 4, 6, 12 μF in parallel and the charge stored at 10 V. *[3 marks]*

Q4. A dielectric $K = 3$ is inserted in a 5 μF capacitor charged to 20 V with the battery disconnected. Find new C, V, and energy. *[3 marks]*

Q5. A 10 μF capacitor charged to 100 V is connected to an uncharged 10 μF capacitor. Find the energy loss. *[4 marks]*
