

Worksheet: Electrostatic Potential and Capacitance

Karnataka State Board · Class 12 · Physics · 5 questions · 14 marks

Name: _____

Date: _____

Score: _____ / 14

Q1. Charges $2\text{ }\mu\text{C}$ and $-2\text{ }\mu\text{C}$ 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 $4, 6, 12\text{ }\mu\text{F}$ in parallel and the charge stored at 10 V . *[3 marks]*

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

Q5. A $10\text{ }\mu\text{F}$ capacitor charged to 100 V is connected to an uncharged $10\text{ }\mu\text{F}$ capacitor. Find the energy loss. *[4 marks]*
