

Physics

- 1- Capacitor is a device used to _____
 - a) store electrical energy
 - b) vary the resistance
 - c) store magnetic energy
 - d) dissipate energy
- 2- . Why does capacitor block dc signal at steady state?
 - a) due to high frequency of dc signal
 - b) due to zero frequency of dc signal
 - c) capacitor doesnot pass any current at steady state
 - d) due to zero frequency of dc signal
- 3- Capacitor stores which type of energy?
 - a) kinetic energy
 - b) vibrational energy
 - c) potential energy
 - d) heat energy
- 4- The effective capacitance of a capacitor is reduced when capacitors are connected in
 - a -series
 - b - parallel
 - c -series-parallel combination
 - d -none of the above
- 5- Capacitance of a parallel plate air capacitor depends on
 - a-Thickness of conducting plates
 - b-Charge on the conducting plates
 - c- Area of the conducting plates
 - d-Distance of separation between the conducting plates

Maths

- (1) Solve questions number 14,15,16 exercise 3.2
- (2) Solve example number 21 on page number 85
- (3) Prove theorem number 1 & 2 on page number 86.
- (4) find the derivative of $\sin x$ from first principle
- (5) Find the value of x if $1/8! + 1/9! = x/10!$