

Note: You have four choices for each objective type question as A, B, C and D. The choice which you think is correct, fill that circle in front of that question number. Use marker or pen to fill the circles. Cutting or filling two or more circles will result in zero mark in that question. Attempt as many questions as given in objective type question paper and leave other blank.

- Due to polarization, electric field E in a capacitor:
 - increases
 - decreases
 - first increases then decreases
 - remains same
- If time constant in RC circuit is small, then capacitor is charged or discharged:
 - slowly
 - rapidly
 - at constant rate
 - intermittently
- Kirchhoff's second rule is based on:
 - law of conservation of energy
 - law of conservation of mass
 - law of conservation of charge
 - law of conservation of momentum
- S.I unit of magnetic permeability is:
 - $\text{Wb A}^{-1}\text{m}^{-1}$
 - Wb m^2
 - Wb mA^{-1}
 - Wb Am^{-1}
- When ohmmeter gives full scale deflection, it indicates,
 - zero resistance
 - infinite resistance
 - small resistance
 - very high resistance
- Lenz's law deals with the:
 - magnitude of induced current
 - direction of induced emf
 - direction of induced current
 - magnitude of induced emf
- When current flowing through an inductor is doubled, then energy stored in it becomes:
 - half
 - four times
 - one fourth
 - double
- In a capacitive circuit of A.C quantity, when $q = 0$, the slope of $q - t$ curve is:
 - minimum
 - maximum
 - zero
 - negative
- When A.C passes through an inductor, voltage leads the current by an angle:
 - 0°
 - 45°
 - 90°
 - 180°
- In extrinsic semi-conductors, doping is of the order of:
 - 1 atom to 10^4
 - 1 atom to 10^8
 - 1 atom to 10^{16}
 - 1 atom to 10^6
- The Boolean equation for exclusive NOR gate is given by:
 - $X = A.B + B.A$
 - $X = A.\bar{B} + \bar{A}.B$
 - $X = A.\bar{B} + \bar{A}.B$
 - $X = A.\bar{B} + \bar{B}.A$
- The potential barrier for silicon at room-temperature is
 - 0.7 volt
 - 0.5 volt
 - 0.3 volt
 - 0.9 volt
- The unit of work function is:
 - volt
 - joule
 - watt
 - farad
- An electron in H-atom is excited from ground state to $n = 4$, how many spectral lines are possible in this case?
 - 3
 - 4
 - 5
 - 6
- Metastable state is _____ than normal excited state.
 - 10^{-5} times larger
 - 10^{-8} times smaller
 - 10^{-3} times smaller
 - 10^5 times larger
- A pair of quark and antiquark make a:
 - meson
 - hadron
 - lepton
 - baryon
- The force which is responsible for the breaking up of the radioactive elements is:
 - strong nuclear force
 - gravitational force
 - electromagnetic force
 - weak nuclear force