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| **MIDTERM TEST****CRT-05** |
| **NAME :** | **CLASS: XII - EINSTEIN** | **SUBJECT: PHYSICS** | **DATE:** **11.09.19** |
| **CH: 7 – ALTERNATING CURRENT** | **MARKS:**  | **25** |

1. What is meant by Wattles Current? (1)

2. Is there any device by which DC can be controlled without any loss of energy. (1)

3. What is the power factor of an LCR Circuit? (2)

4. Explain why batteries cannot be chanrged by ac. (2)

5. An alternating rms current of 1.5 mA and angular frequency w = 100 rad/s flows through a 10k$Ω$ resistor and a 0.5$μ$F capacitor in series. Calculate the rms voltage across the capacitor and impedance of the circuit. (2)

6. How will you detect with the help of a powerful magnet that the current flowing in a lamp is alternating or direct. (2)

7. Distinguish between resistance, reactance and impedance for an AC circuit. (2)

8. Why is it not possible to have electrolysis by AC. (2)

9. Show athematically that in a pure capacitive AC circuit, current leads the voltage by 90°. (3)

10. Prove that an ideal inductor does not dissipate power in an AC circuit. (3)

11. Explain the construction of AC dynamo with suitable diagram. (5)