

## Worksheet: Alternating Current

Uttar Pradesh State Board · Class 12 · Physics · 5 questions · 12 marks

Name: \_\_\_\_\_

Date: \_\_\_\_\_

Score: \_\_\_\_\_ / 12

**Q1.** A 220 V AC supply has what peak voltage? *[2 marks]*

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**Q2.** A step-down transformer converts 220 V to 11 V with 1000 primary turns. Find the secondary turns. *[2 marks]*

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**Q3.** An LCR circuit has  $R = 20$ ,  $X_L = 30$ ,  $X_C = 10$  ohm. Find impedance and phase angle. *[3 marks]*

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**Q4.** A 0.1 H inductor and 50  $\mu\text{F}$  capacitor are in series. Find the resonant frequency. *[3 marks]*

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**Q5.** In an LCR circuit  $V = 200$  V,  $I = 5$  A, power consumed = 800 W. Find the power factor. *[2 marks]*

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