

Assignment-2021
2nd semester Honors
Paper code: PHY-HC-2016
Electricity and magnetism
Total marks = 30

1. Define Biot-Savert law and Ampere's law in magnetostatics. Determine the magnetic field due to finite current carrying element using Biot-Savert law. Hence determine the magnetic field at the center of an equilateral triangular current carrying element carrying current 'I' in clockwise direction. 3+7+5 =15 marks

2. Explain the series LCR circuit for an AC signal deriving the expressions for resonance, Quality factor and bandwidth. What do you understand by sharpness of resonance and selectivity of a series LCR circuit? 10+5=15 marks.

(Note: Equations, diagrams, graphical representations are always appreciated wherever necessary)