PHYSICS

BOOKS - PUNJAB BOARD PREVIOUS YEAR PAPERS

Magnetic Effects of Current

Excersice

1. A horizontalwire 0.1m longcarries a current of 5 A. Findthe magnitude of magnetic field

which can support the weight of the wire. Mass of given wire is $3 \times 10^3 Kgm^{-1}$.

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2. A 0.5m long solenoid has 500 turns and has a flux density of 2.52×10^{-3}T at its centre. Find the current in the solenoid. (Given $\mu = 4\pi \times 10^{-7} TA^{-1}m$).

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3. A solenoid of length 50cm, having 100 turns carries a current of 2.5A. Find the magnetic field in the interior of the solenoid.

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4. A solenoid of length 50cm, having 100 turns carries a current of 2.5A. Find the magnetic field at one end of the solenoid.

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5. Define Ampere's swimming rule for magnetic effect of current.

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6. Define Ampere's circuital law.

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7. State Biot-Savert's law.

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8. What is Ampere's swimming (SNOW) Rule ?

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9. Define one tesla.,

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10. Define S.I. unit of magnetic field.

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11. What is meant by magnetic flux? State its S.I. unit.

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12. Name the physical quantity whose S.I. unit is ampere/meter2.

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13. State Biot-Savert's law.

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14. State Maxwell's cork screw rule.

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15. What is Maxwell's right hand thumb rule?

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16. The direction of magnetic field produced on passing electric current in a conductor is determined by

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17. Define one tesla.,

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18. Derive an expression for the magnetic field.at the centre of a current carrying coil.

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19. Using Ampere.s circuital law derive an expression for magnetic field due to infinitely long current carrying wire at a point at distance Yfrom it.

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20. Prove Ampere Circuital law.

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21. Using Ampere.s circuital law derive an expression for magnetic field due to infinitely long current carrying wire at a point at distance Yfrom it.

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22. Find magnetic field intensity at a point well inside the solenoid carrying current.

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23. Using Ampere.s circuital law derive an expression for magnetic field due to infinitely long current carrying wire at a point at distance Yfrom it.

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24. Using Ampere.s circuital law derive an expression for magnetic field due to infinitely long current carrying wire at a point at distance Yfrom it.

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25. Derive an expression for the magnetic field.at the centre of a current carrying coil.

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26. Using Ampere.s circuital law derive an expression for magnetic field due to infinitely long current carrying wire at a point at distance Yfrom it.

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27. Derive an expression for the magnetic field.at the centre of a current carrying coil.

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28. State Biot-Savart law. Using Biot-Savart law find the magnitude and direction of magnetic field at a point on the axis of a circular coil of radius 'r', distant 'x' from the center having number of turns N carrying current 'I'.

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29. State Ampere's circuital law. By using it derive an expression for magnetic field

intensity at a point due to a straight current carrying conductor.

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30. Using Biot Savart's law derive an expression for the magnetic field due to a circular current carrying loop at any point on its axis.

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31. Using Ampere.s circuital law derive an expression for magnetic field due to infinitely long current carrying wire at a point at distance Yfrom it.

Watch Video Solution

32. Using Ampere.s circuital law derive an expression for magnetic field due to infinitely long current carrying wire at a point at distance Yfrom it.

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33. Derive an expression for the magnetic field.at the centre of a current carrying coil.

Watch Video Solution

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40. State Maxwell's cork screw rule.

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42. State Biot-Savert's law.

Watch Video Solution

43. Derive an expression for the magnetic field.at the centre of a current carrying coil.

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44. Define Ampere's circuital law.

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45. Find magnetic field intensity at a point well inside the solenoid carrying current.

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46. Find magnetic field intensity at a point well inside the solenoid carrying current.

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47. Derive an expression for the magnetic field.at the centre of a current carrying coil.

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