PhysicsByAaryan

CSIR NET . GATE . JEST . BARC - Physics

Magnetism in matter - CSIR NET Physics PYQs

Electromagnetism . All PYQs (2015-2025) with answer key

2 questions . Answer key included

www.physicsbyaaryan.com . www.csirnetphysics.com
Contact: 9501976811

Q1. [June 2022] . 5.0 marks

Electromagnetism > Magnetism in matter

CSIR NET	2022 June	5M

A stationary magnetic dipole $\vec{m} = m\hat{k}$ is placed above an infinite surface ($z = 0$) carrying a uniform surface current density $\vec{\kappa} = k\hat{i}$. The torque of the dipole is

1. $\frac{\mu_0}{2} mk\hat{i}$
2. $-\frac{\mu_0}{2} mk\hat{i}$
3. $\frac{\mu_0}{2} mk\hat{j}$
4. $-\frac{\mu_0}{2} mk\hat{j}$

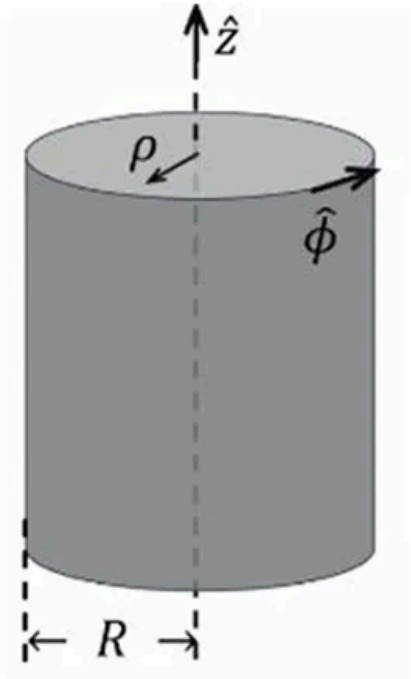
Q2. [June 2025] . 5.0 marks

Electromagnetism > Magnetism in matter

CSIR NET	2025 June	5M	EMT

A long cylinder of radius R carries a magnetization $\vec{M} = k\rho^2\hat{\phi}$, where k is a constant, ρ is the radial distance from the axis and $\hat{\phi}$ is the azimuthal unit vector (see in the figure). The magnetic field inside and outside the cylinder would be

1. $\vec{B}_{\text{inside}} = 0, \vec{B}_{\text{outside}} = \mu_0 k\rho^2\hat{\phi}$
2. $\vec{B}_{\text{inside}} = \mu_0 k\rho^2\hat{\phi}, \vec{B}_{\text{outside}} = 0$
3. $\vec{B}_{\text{inside}} = \vec{B}_{\text{outside}} = \mu_0 k\rho^2\hat{\phi}$
4. $\vec{B}_{\text{inside}} = \vec{B}_{\text{outside}} = 0$



Answer Key

2 questions . Subject and topic for quick revision

Q. No	Subject	Topic	Answer
Q1	Electromagnetism	Magnetism in matter	**1**
Q2	Electromagnetism	Magnetism in matter	**2**

Study with PhysicsByAaryan

Full CSIR NET / GATE / JEST / BARC Physics live batch by Aaryan Mehra Sir.
Concept-first teaching, complete PYQ coverage, daily doubt support.

Use coupon CONSISTENCY for Rs. 500 off

Visit
www.physicsbyaaryan.com
www.csirnetphysics.com

Contact
9501976811