

JEE MAIN MOVING CHARGES AND MAGNETISM — AMPERE'S CIRCUITAL LAW AND ITS APPLICATIONS — PYQS

Max. Marks: 12

Questions: 3

Section A (MCQ) — 3 questions

- Q.1** A current of 30 A each flows in opposite directions in two conducting wires, placed parallel to each other at a distance of 8 cm. The magnetic field at the mid point between the two wires is _____ μT .

$$\left(\frac{\mu_0}{4\pi} = 10^{-7} \text{ N/A}^2\right)$$

[JEE Main 2026 (Online) 6th April Evening Shift]

- (1) 30 (2) 300 (3) 150 (4) 0.0

Scan or tap for the
full solution



- Q.2** A long cylindrical conductor with large cross section carries an electric current distributed uniformly over its cross-section. Magnetic field due to this current is:

- A. maximum at either ends of the conductor and minimum at the midpoint
 B. maximum at the axis of the conductor
 C. minimum at the surface of the conductor
 D. minimum at the axis of the conductor
 E. same at all points in the cross-section of the conductor

Choose the **correct** answer from the options given below:

[JEE Main 2026 (Online) 28th January Evening Shift]

- (1) B, C Only (2) E Only
 (3) A, D Only (4) D Only

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- Q.3** Consider a long straight wire of a circular cross-section (radius a) carrying a steady current I . The current is uniformly distributed across this cross-section. The distances from the centre of the wire's cross-section at which the magnetic field [inside the wire, outside the wire] is half of the maximum possible magnetic field, any where due to the wire, will be :

[JEE Main 2025 (Online) 29th January Morning Shift]

- (1) $[a/2, 3a]$ (2) $[a/4, 3a/2]$
 (3) $[a/2, 2a]$ (4) $[a/4, 2a]$

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ANSWER KEY

Ques.	1	2	3										
Ans.	2	4	3										