

PYQSide

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

Max. Marks: 12

Questions: 3

Section A (MCQ)

- 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										