PART 1 - PHYSICS

Topic : Current electricity

SECTION–1 : (Maximum Marks : 3)

- This section contains **ONE** question.
- Each question has **FOUR** options (A), (B), (C) and (D). **ONLY ONE** of these four options is the correct answer.
- For each question, choose the option corresponding to the correct answer.
- Answer to each question will be evaluated according to the following marking scheme :

Full Marks	: +3	If ONLY the correct option is chosen;
Zero Marks	: 0	If none of the options is chosen (i.e. the question is unanswered);
Negative Marks	: −1	In all other cases.

1. A metal wire of cross-sectional area 0.5 mm^2 and length 100 m is connected across a battery of e.m.f. 2 V and internal resistance 1 Ω. The density, atomic mass and electrical conductivity of the metal are 6.35×10^3 kg m^{-3}, 63.5 gm/mole and 2×10^8 mho m^{-1}, respectively. Assuming one conduction electron per atom of the metal, the drift velocity (in mm s^{-1}) of the electrons in the wire is:
[Take Avogadro's number as 6×10^{23} and charge of the electron as 1.6×10^{-19} C.]

[JEE Advanced 2026 Paper 2]

(A) 0.052 (B) 0.104 (C) 0.208 (D) 0.156

Scan or tap for the full solution

Space for Rough Work

PYQSide

TEST SERIES
(Academic Session : 2026-2027)

JEE ADVANCED CURRENT ELECTRICITY — PYQS

Test Pattern : **JEE (Advanced)**

ANSWER KEY

SECTION–1																													
Ques.	1																												
Ans.	**C**																												