

JEE MAIN MAGNETISM AND MATTER — MAGNETIC DIPOLE IN A UNIFORM FIELD — PYQS

Max. Marks: 8

Questions: 2

Section A (MCQ) — 1 question

Q.1 A magnetic dipole experiences a torque of $80\sqrt{3}$ N m when placed in uniform magnetic field in such a way that dipole moment makes angle of 60° with magnetic field. The potential energy of the dipole is:

[JEE Main 2025 (Online) 3rd April Evening Shift]

- (1) $-40\sqrt{3}$ J (2) -80 J
(3) 80 J (4) -60 J

Scan or tap for the full solution



Section B (Numerical) — 1 question

Q.2 A short bar magnet placed with its axis at 30° with an external field of 800 Gauss, experiences a torque of 0.016 N m. The work done in moving it from most stable to most unstable position is $\alpha \times 10^{-3}$ J. The value of α is _____.

[JEE Main 2026 (Online) 24th January Morning Shift]

Scan or tap for the full solution



ANSWER KEY

Section A (MCQ) — 1 question

[illegible]

Section B (Numerical) — 1 question

[illegible]