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NEET WORK, ENERGY AND POWER — CONSERVATIVE AND NON-CONSERVATIVE FORCES — PYQS

Max. Marks: 12 **Questions:** 3

Section A (MCQ) — 3 questions

Q.1 The potential energy of a particle in a force field is $U = \frac{A}{r^2} - \frac{B}{r}$ where A and B are positive constants and r is the distance of particle from the centre of the field. For stable equilibrium, the distance of the particle is [AIPMT 2012 (Prelims)]

(1) $\frac{B}{2A}$ (2) $\frac{2A}{B}$ (3) $\frac{A}{B}$ (4) $\frac{B}{A}$

Scan or tap for the full solution

Q.2 The potential energy of a system increases if work is done [AIPMT 2011 (Prelims)]

(1) upon the system by a nonconservative force

(2) by the system against a conservative force.

(3) by the system against a nonconservative force.

(4) upon the system by a conservative force.

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Q.3 A body of mass 1 kg is thrown upwards with a velocity 20 m s^{-1}. It momentarily comes to rest after attaining a height of 18 m. How much energy is lost due to air friction? (g = 10 m s^{-2}) [AIPMT 2009]

(1) 30 J (2) 40 J (3) 10 J (4) 20 J

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ANSWER KEY

Ques.	1	2	3								
Ans.	**2**	**2**	**4**								