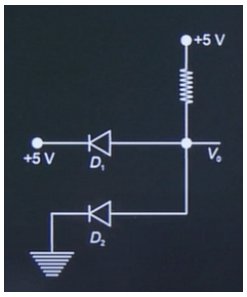
JEE Main 8 April 2025 Shift 2

Physics Question Paper with Answer Key

Q.No.	Questions	Answers
1	Find output voltage in the given circuit. 	Zero
2	A fractional errors in x, y and z are 0.1, 0.2 and 0.5 respectively. Find maximum fractional error in $x^{-2}y^{3/2}z^{-2/5}$.	0.7
3	For a nucleus of mass number A and radius R, mass/density p. Then choose the correct option	p is independent of A
4	A convex lens (f = 30 cm) is in contact with concave lens (f = 20 cm). Object is placed on the left side at a distance of 20 cm. Find the image distance.	15 cm
5	There are two charged sphere of radius R and 3R. When the sphere are made to touch each other and then separate, the surface charge density becomes r_1 and r_2 respectively. Find r_1/r_2.	3
6	Given λ = 2nc/m (linear charge density) is for Q wire which is passing m through body diagonal of a closed cube of side length $\sqrt{3}$ cm. Find flux through the cube.	2.16π

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7	A monoatomic gas is stored in a thermally insulated container. The gas is suddenly compressed to $(1/8)^{th}$ of its initial volume. Find ratio of final pressure to initial pressure.	32
8	Two balls are projected with same speed at different angles. If maximum height of 1^{st} is 8 times maximum height of 2^{nd} ball. Find the ratio of their time of flight.	$2\sqrt{2} : 1$
9	A uniform disc of radius r is rotating about an axis passing through diameter with angular speed 800 rpm. A torque of magnitude 25π Nm is applied on the disc for 40 sec. If final angular speed of disc is 2100 rpm. Find radius of the disc if mass is 1 kg.	$20\sqrt{3}/13$
10	Water falls from 200 m height. What is increase in temperature when it touches the bottom? (Assume that all the heat goes into same amount of mass which was falling).	$10/20^{O}C$

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