



# PHYSICS

## BOOKS - U-LIKE PHYSICS (HINGLISH)

### MODEL TEST PAPER 1 (UNSOLVED)

#### Section A

1. A hollow metal sphere of radius  $5\text{cm}$  is charged so that the potential on its surface is

10V. The potential at the centre of the sphere is

A. 0 V

B. 10 V

C. same as at a point 5 cm away from the surface.

D. same as at a point 25 cm away from the surface

**Answer:**



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2. In hydrogen atom which quantity is integral multiple of  $\frac{h}{2\pi}$

- A. angular momentum
- B. angular velocity
- C. angular acceleration
- D. momentum

**Answer:**



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3. Two monochromatic beam A and B of equal intensity  $I$ , hit a screen. The number of photons hitting the screen by beam A is twice that by beam B. Then what inference can you make about their frequencies?

A. 1 : 2

B. 2 : 1

C. 1 : 1

D. 1 : 3

**Answer:**



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## Section B

1. An  $\alpha$  – particle and a proton of the same kinetic energy are in turn allowed to pass through a magnetic field  $\vec{B}$ , acting normal to the direction of motion of the particles. Calculate the ratio of radii of the circular paths described by them.



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