

The simple Bohr model is not applicable to  $\text{He}^4$  atom because

- (a)  $\text{He}^4$  is an inert gas.
- (b)  $\text{He}^4$  has neutrons in the nucleus.
- (c)  $\text{He}^4$  has one more electron.
- (d) electrons are not subject to central forces.

Correct options are C) and D)

Bohr's atomic model is applicable only for one electron species and in  $\text{He}^4$  there are two electrons. Electrons are not subject to central forces due to longer distance than nuclear size, hence verifies answer (c) and (d).