

**Q. 5** In a cyclotron, a charged particle

- (a) undergoes acceleration all the time
- (b) speeds up between the dees because of the magnetic field
- (c) speeds up in a dee
- (d) slows down within a dee and speeds up between dees

### K Thinking Process

*Here, understanding of working of cyclotron is needed.*

**Ans. (a)** *The charged particle undergoes acceleration as*

- (i) speeds up between the dees because of the oscillating electric field and
- (ii) speed remain the same inside the dees because of the magnetic field but direction undergoes change continuously.