

## Exemplar Problems

Q12. When sodium is dissolved in liquid ammonia, a solution of deep blue colour is obtained. The colour of the solution is due to

- (a) ammoniated electron
- (b) sodium ion
- (c) sodium amide
- (d) ammoniated sodium ion

Sol:  $(a) M^{+(x+y)} + (x+y) NH_3 \rightarrow M^+(NH_3)_x + e^-(NH_3)_y$

The colour of solution (deep blue) is due to the ammoniated electron which absorbs energy in the visible region.

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