- 8. Arrange the following carbanions in order of their decreasing stability.
- (A) H<sub>3</sub>C-C ≡ C-
- (B) H-C ≡ C-
- (C) H<sub>3</sub>C CH-2
- (a) A>B>C
- (b) B>A>C
- (c) C>B>A
- (d) C>A>B

**Sol:** (b) The order of decreasing stability of carbanions is:

$$H - C \equiv C^{-} > CH_{3} - C \equiv C^{-} > CH_{3} - CH^{-}$$
(B) (A) (C)

sp-hybridised carbon atom is more electronegative than sp3-hybridised carbon atom and hence, can accommodate the negative charge more effectively. –  $CH_3$  group has +1 effect, therefore, it intensifies the negative charge and, hence, destabilises the carbanion  $CH_3 \rightarrow C = C^-$ .