

### DPP No. 7

**Total Marks: 32** 

Max. Time: 35 min.

**Topic: General Organic Chemistry** 

#### Type of Questions

M.M., Min.

Single choice Objective ('-1' negative marking) Q.1 to Q.4

(3 marks, 3 min.) [12, 12]

Multiple choice objective ('-1' negative marking) Q.5 to Q.6

(4 marks, 4 min.) [8, 8]

Subjective Questions ('-1' negative marking) Q.7

[4, 5]

(4 marks 5 min.)

Match the Following (no negative marking) Q.8

(8 marks, 10 min.) [8, 10]

1. The correct stability order for the following is

$$CH_3$$
- $CH_2$ - $CH_2$ 
 $I$ 

(A) III 
$$>$$
 IV  $>$  I  $>$  II

(B) 
$$I > II > III > IV$$

(C) 
$$IV > III > I > II$$

(D) III 
$$>$$
 IV  $>$  II

2. The stability order of:





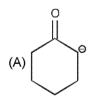


(A) 
$$1 > 2 > 3$$

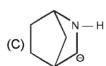
(C) 
$$2 > 1 > 3$$

(D) 
$$1 > 3 > 2$$

3. Which carbanion is not planer

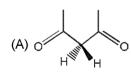


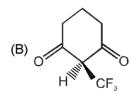






4. Which of the following do not form planner carbanion on treatment with base.









- **5.\*** Which of the following is/are correct relation between given pairs?
  - $(A) \xrightarrow[CH_2]{S} \downarrow \qquad \qquad \longrightarrow \text{Resonating structures}$

  - (C)  $CH_3$  C = CCH = NH  $CH_3$   $CH_3$   $CH_3$   $CH_3$   $CH_3$   $CH_3$   $CH_4$   $CH_5$   $CH_5$  CH
- **6\*.** In which of the following Ist is more stable than IInd:
  - $(A) \xrightarrow{\oplus} , \xrightarrow{\oplus} , \qquad (B) \xrightarrow{\bigoplus} , \qquad (B)$
  - (C)  $CH_2 = CH$ , HC = C (D)  $CH_2 = CH$
- 7. How many total enolic forms (including stereoisomers) are possible for CH<sub>2</sub>-C-CH<sub>2</sub>-CH<sub>2</sub>.
- 8. Match the compounds given in column-I with their electronic effect and stereoisomerism in column-II.

  Column-I

  Column-II
  - (A) C CH. (p) Inductive effect
  - (B)  $\begin{array}{c} D \\ | \\ Ph-C-CH=CHD \\ | \\ CH_{3} \end{array}$  (q) Resonance
  - (C)  $CH_3-CH=CH=CH_2$  (r) Geometrical isomerism
  - (D)  $H_3C$   $C=C=C < CH_3$  (s) Optical isomerism (t) Chiral carbon

# Answer Key

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1. (A) 2. (C) 3. (B) 4. (C) 5.\* (ABD) 6\*. (ABC) 7. 7 8. (A) - (p, q, r); (B) - (p, q, r, s,t); (C) - (p, q, r); (D) - (p, s)

## **Hints & Solutions**

### **DPP No. #7**

- 1. Stability of carbon is increases by electron withdrawing group.
- Stability of aromatic spicies is greatest.
- sp<sup>3</sup> hybridised carbanion is not planar specces.
- 5.\* In option (A) Conjugation of π-bonds. In option (B) +M effect of –NH<sub>2</sub> group In option (C) Functional isomers.

In option (D) Tautomers.

The charge on more electropositive element is more stable.