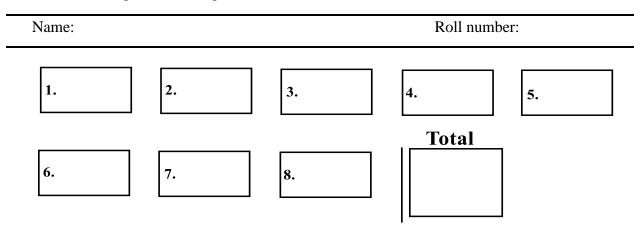
## Mid Sem Exam for Organic Chemistry: Fundamentals and Applications (CSO201A)

Total Marks: 25 Time: 120 min

## **Instructions:**

- 1. Give clear and concise answers to the questions. **DO NOT WRITE LONG PARAGRAPHS**.
- 2. Answer all the questions.
- 3. There is no negative marking.



1) Find the product(s)  $\bf A, \bf B$  and  $\bf C$  for the given reaction.

3 Marks

$$\begin{array}{c}
CO_2Me \\
O \longrightarrow O \longrightarrow O
\end{array}$$

$$\begin{array}{c}
CO_2Me \\
O \longrightarrow O
\end{array}$$

$$\begin{array}{c}
MeO_2C \\
O \longrightarrow O
\end{array}$$

$$\begin{array}{c}
H^+/H_2O \\
O \longrightarrow O
\end{array}$$

$$\begin{array}{c}
H^+/H_2O \\
O \longrightarrow O
\end{array}$$

2) Desired product for the given reaction is?

2 Marks

3) Find the correct product for the given reaction.

2 Marks

4) Identify product(s) **A** and **B** for the given reaction.

2 Marks

- 5) Identify product for the given reaction and write the detailed mechanism.
- 4 Marks

- 6) Identify product for the given reaction and give the mechanism for the product **B**.
  - 4 Marks

- 7) Identify product(s) for the given reactions.
  - CO<sub>2</sub>Me

    5% Pd(OAc)<sub>2</sub>

    Ph<sub>3</sub>P, Et<sub>3</sub>N
    CH<sub>3</sub>CN, rt
- O 1a. MgBr
  THF
  1b. H<sub>2</sub>O

  A 2. H<sup>+</sup>
  -H<sub>2</sub>O

  B
- 8) Choose the desired product for the following reaction?

2 Marks

4 Marks

a)

- a) A
- b) B
- c) C
- d) A and B
- e) A and C
- b) What is the product A in given reaction?

2 Marks