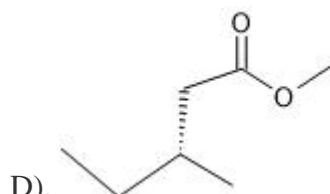
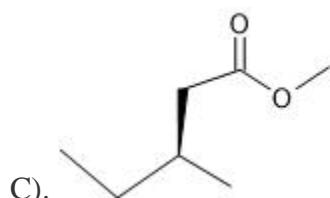
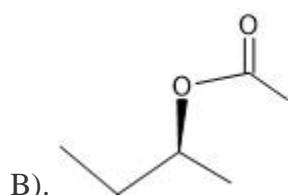
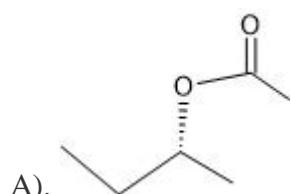
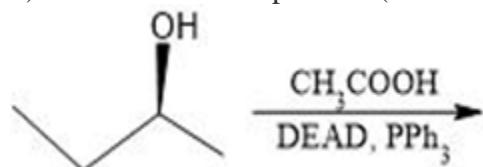
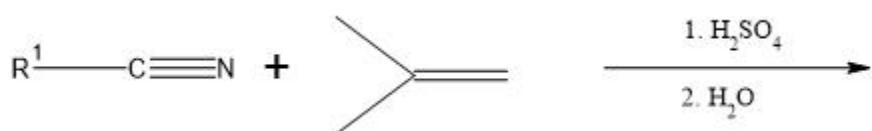


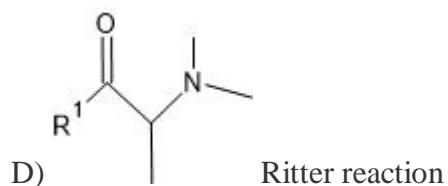
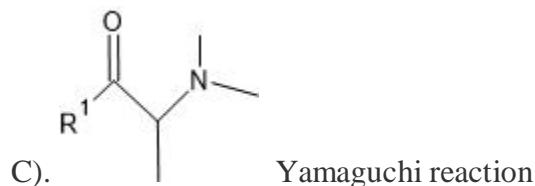
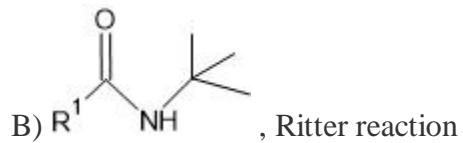
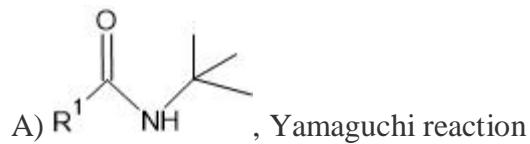
### M. Sc. II Sem. III (Synthetic organic chemistry I) mock exam

- 1). The reaction that involves the formation of both C-C and C-O bond is:
- A).Diels- Alder reaction
  - B).Darzen's Glycidic ester condensation
  - C).Aldol reaction
  - D).Petersons Olefination
- 2). Which is correct product (with correct stereochemistry) of the following reaction:

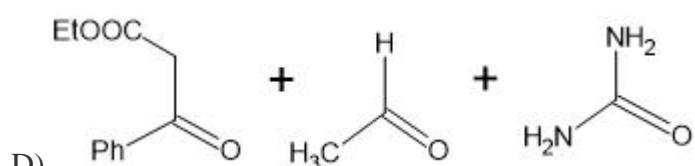
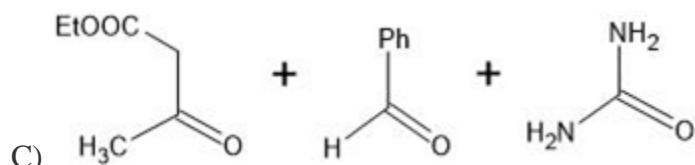
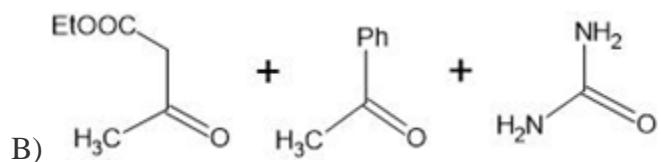
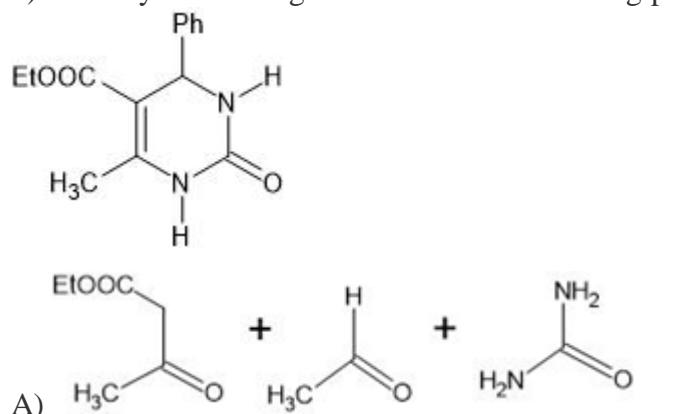


- 3). Predict the correct product and name of the following reaction:





4). Identify the starting material for the following product of Biginelli reaction:



5). Which of the following reaction belongs to the class of click reaction?

- A).Nazarov cyclization
- B).Diels- Alder reaction
- C).Strecker synthesis
- D).Huisgen 1,3- dipolar cycloaddition

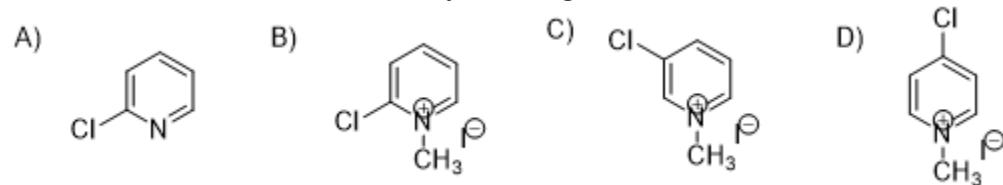
6). Which reaction is used for the facile synthesis of Dihydropyrimidones?

- A).Ugi reaction
- B).Passerini reaction
- C).Biginelli reaction
- D).Strecker reaction

7). Ugi reaction is an example of:

- A).4 component reaction
- B).3 component reaction
- C).5 component reaction
- D).2 component reaction

8). The correct structure of Mukaiyama reagent is \_\_\_\_\_



- A) A
- B) B
- C) C
- D) D

9). The reductive homocoupling of a ketone leads to the formation of \_\_\_\_\_

- A).1,2-diol
- B).1,3-diol
- C).hydroxylketone
- D).diketone

10). During Mass spectrometry \_\_\_\_\_ produced is recorded in the spectrum.

- A).Radical cation
- B).radical anion

C).persistent radical

D).neutral free radical

11). Irradiation of equimolar mixture of n-butane with bromine by UV light gives \_\_\_\_\_ as the major product.

A).2-bromobutane

B).1,4-dibromobutane

C).1,2-dibromo butane

D).1-bromobutane

12). In Barton reaction, \_\_\_\_\_ is used as a free radical trap.

A).tin compound

B).cobalt compound

C).mercury compound

D).Thio compound

13). Electrophilic radical reacts with,

A). $\pi$  deficient alkene

B).Neutral alkene

C). $\pi$  rich alkene

D).electron deficient radical

14). Treatment of metal salt of carboxylic acid with halogen to yield corresponding alkyl halide with removal of CO<sub>2</sub> is called as,

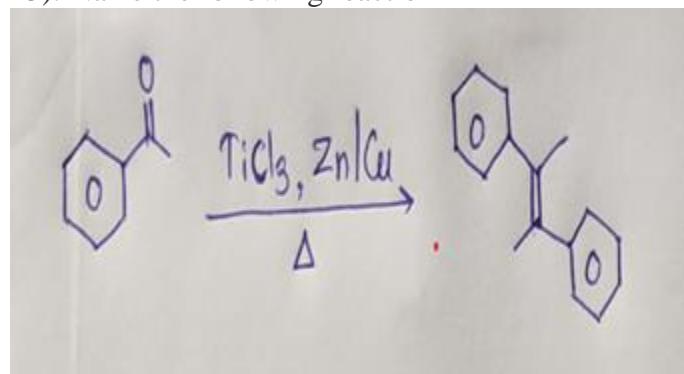
A).Kolbe's electrolysis

B).reductive coupling

C).Hunsdiecker reaction

D).Acyloin condensation

15). Name the following reaction



- A).Pinacol reaction
- B).Sandmeyer reaction
- C).Acyloin condensation
- D).McMurtry reaction

16). Asymmetric hydroboration is achieved using.....

- A).9-BBN
- B).Thexylborane
- C).Disiamylborane
- D).Diisopinocamphenyl borane

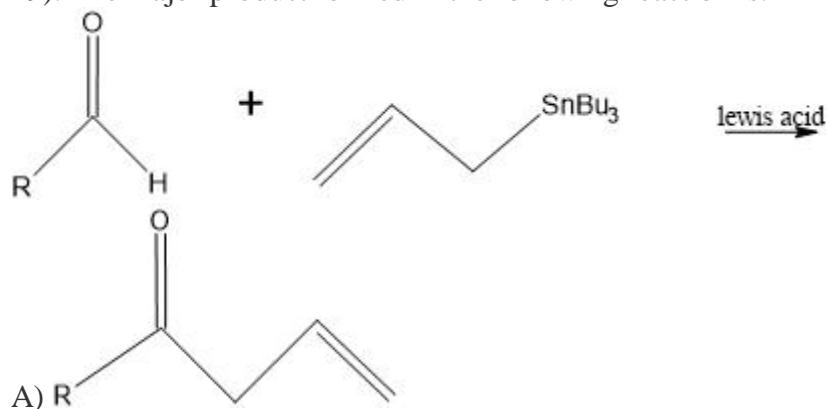
17). Selenoacetals can be prepared by .....

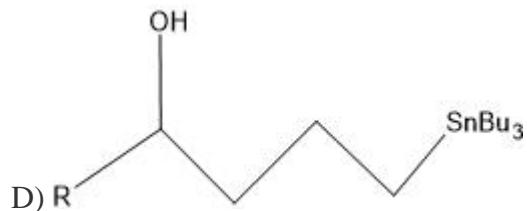
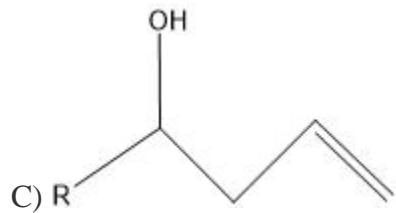
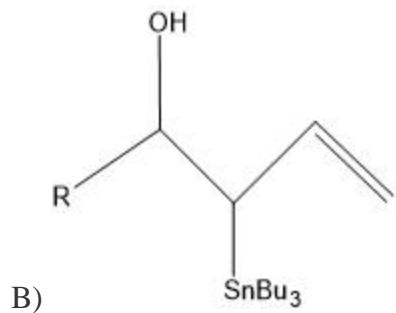
- A).Reaction of ketone with selenols in the acidic medium
- B).Elimination of selenoxide
- C).Reaction of alkyl magnesium halide compound with Se metal in the presence of dry ether
- D).Reaction of ketone with selenium dioxide.

18). Addition of tributyltin hydride across the multiple bond is called as.....

- A).Hydrostannation
- B).Hydrogenation
- C).Hydrolysis
- D).Hydroxystannation

19). The major product formed in the following reaction is:





20). Elimination of selenoxide to give alkene is a ..... process.

- A).Pyrolytic syn elimination
- B).Pyrolytic anti elimination
- C).E2 elimination
- D).E1CB elimination

### ANSWER KEY

Question	Answer	Question	Answer
1	b	11	a
2	a	12	d
3	b	13	c
4	c	14	c
5	d	15	d
6	c	16	d
7	a	17	a
8	b	18	a
9	a	19	c
10	a	20	a

