

# Unit 15 - Week 11: ORGANIC TRANSFORMATIONS-USING TRANSITION METALS PART-IV

## Course outline

How to access the portal?

Week 0: Prerequisites

WEEK 1: OXIDIZING AGENT IN ORGANIC TRANSFORMATION PART-I

Week 2 : OXIDIZING AGENT IN ORGANIC TRANSFORMATION PART-II

Week 3 : REDUCING AGENT IN ORGANIC TRANSFORMATION PART-I

Week 4 : REDUCING AGENT IN ORGANIC TRANSFORMATION PART-II

Week 5: ORGANIC TRANSFORMATIONS-USING NON-TRANSITION METALS PART-I

Live Session-1

Week 6: ORGANIC TRANSFORMATIONS-USING NON-TRANSITION METALS PART-II

Week 7: Organic Transformations-Using Non-Transition Metals Part-III

Week 8: ORGANIC TRANSFORMATIONS-USING TRANSITION METALS PART-I

week 9: ORGANIC TRANSFORMATIONS-USING TRANSITION METALS PART-II

Live Session-2

Week 10 : ORGANIC TRANSFORMATIONS-USING TRANSITION METALS PART-III

Week 11: ORGANIC TRANSFORMATIONS-USING TRANSITION METALS PART-IV

Lec 1: Ag and Rh BASED REAGENTS IN ORGANIC SYNTHESIS

Lec 2: Ni, Pt and Ir BASED REAGENTS IN ORGANIC SYNTHESIS

Quiz : Assignment -11

Feedback form

WEEK 12 : ORGANIC TRANSFORMATIONS-USING LANTHANIDES REAGENTS

Live Session-3

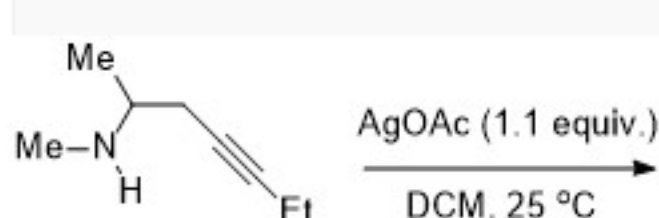
## Assignment -11

The due date for submitting this assignment has passed. As per our records you have not submitted this assignment.

Due on 2019-10-16, 23:59 IST.

1) Predict the product of the following reaction:

2 points



- (a)
- (b)
- (c)
- (d)

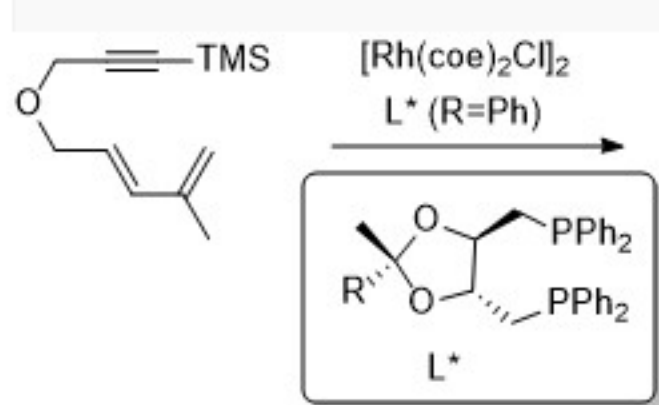
No, the answer is incorrect. Score: 0

Accepted Answers:

- (c)

2) Predict the product of the following reaction:

2 points



- (a)
- (b)
- (c)
- (d)

No, the answer is incorrect. Score: 0

Accepted Answers:

- (b)

3) For Monsanto process, which statement is/are correct?

2 points

(i) The catalytically active species is the anion  $cis-[Rh(CO)2I2]^-$

(ii) The first organometallic step is the oxidative addition of methyl iodide to  $cis-[Rh(CO)2I2]^-$  to form the hexacoordinate species  $[(CH3)Rh(CO)2I3]^-$ .

(iii) This anion rapidly transforms, via the migration of a methyl group to an adjacent carbonyl ligand, affording the pentacoordinate acetyl complex  $[(CH3CO)Rh(CO)I3]^-$ .

(iv) This five-coordinate complex then reacts with carbon monoxide to form the six-coordinate dicarbonyl complex, which undergoes reductive elimination to release acetyl iodide ( $CH3C(O)I$ ).

- A Only (i) and (iii)
- B Only (ii) and (iv)
- C Only (i), (ii) and (iii)
- D All of the above

No, the answer is incorrect. Score: 0

Accepted Answers:

D All of the above

4) Shell Higher Olefins Process (SHOP) consists of 3 steps.

2 points

1. Metathesis
2. Oligomerization of ethylene
3. Isomerization of C4-C10 and >C20.

Predict the sequence of steps.

- (a) 2, 3, 1
- (b) 1, 3, 2
- (c) 1, 2, 3
- (d) 3, 2, 1

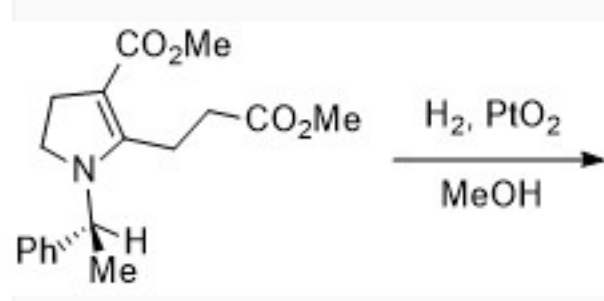
No, the answer is incorrect. Score: 0

Accepted Answers:

(a) 2, 3, 1

5) Predict the product of the following reaction:

2 points



- (a)
- (b)
- (c)
- (d)

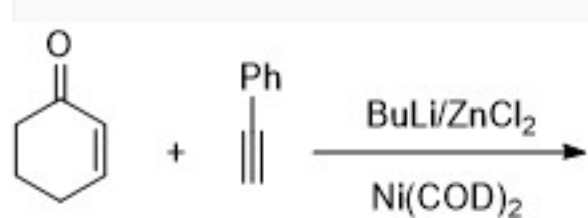
No, the answer is incorrect. Score: 0

Accepted Answers:

- (c)

6) Predict the product of the following reaction:

2 points



- (a)
- (b)
- (c)
- (d)

No, the answer is incorrect. Score: 0

Accepted Answers:

- (b)