Bài Tập: Chương I

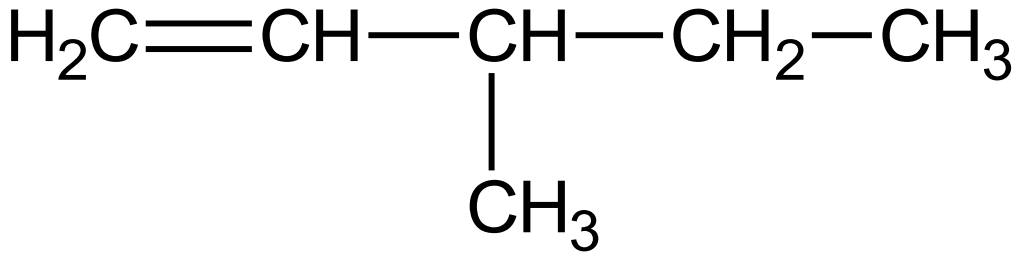
1. Buten-1(X); Buten-2(Y): Đ.p hình học?

CH_3-CH_2-CH=CH_2 CH_3-CH=CH-CH_3 (c)

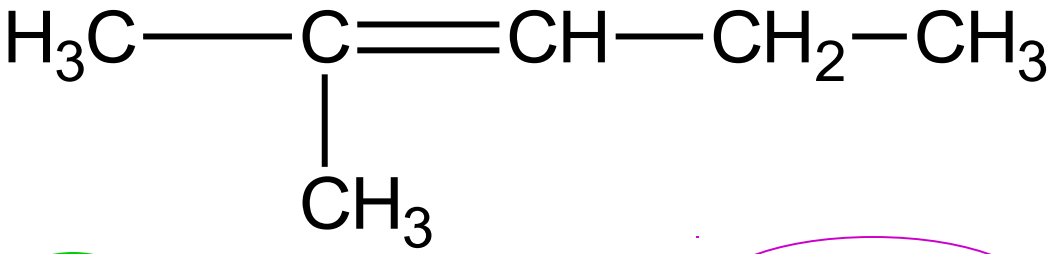
2. Chất có đp hình học?

a. Penten-1: CH_2=CH-CH_2-CH_2-CH_3

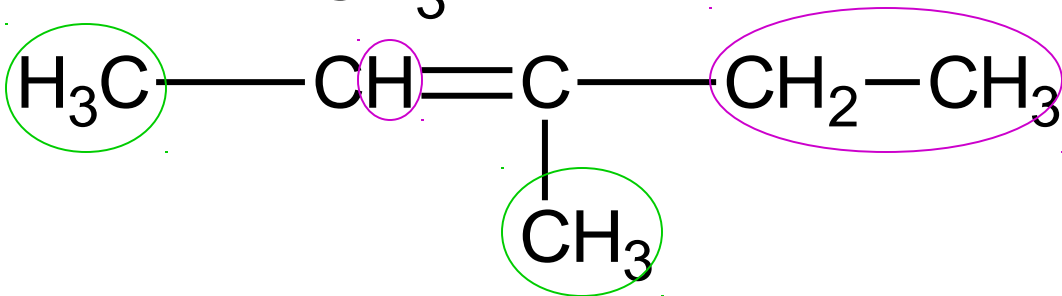
b. 3-metylpenten-1:



c. 2-metylpenten-2:

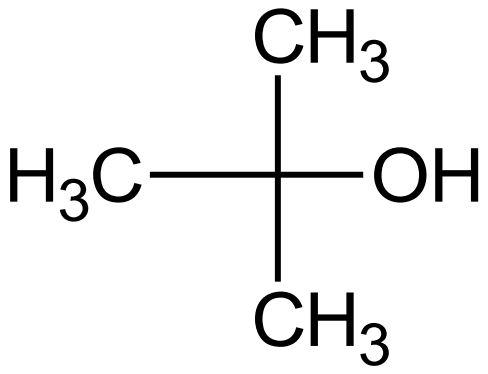


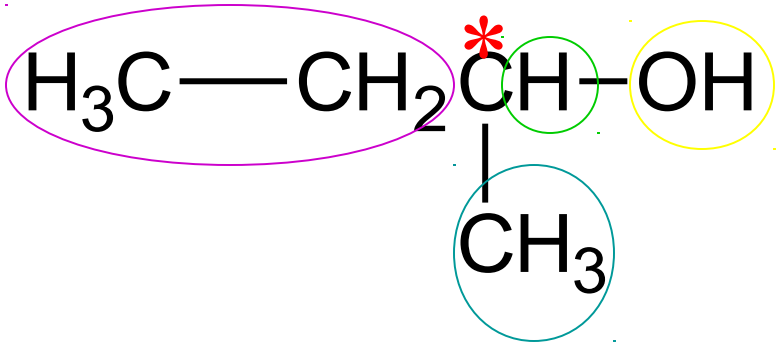
d. 3-metylpenten-2:



Câu d

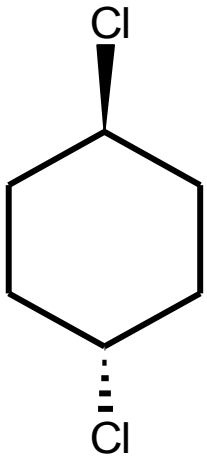
3. Rượu t-butylic,và s-butylic: Đp quang h?

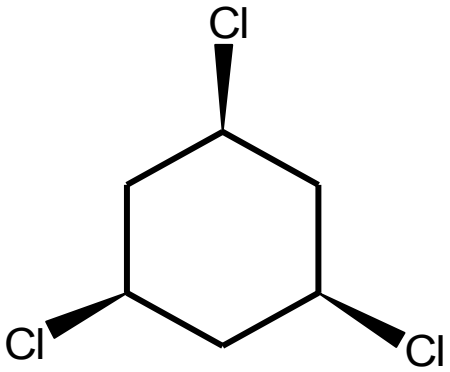


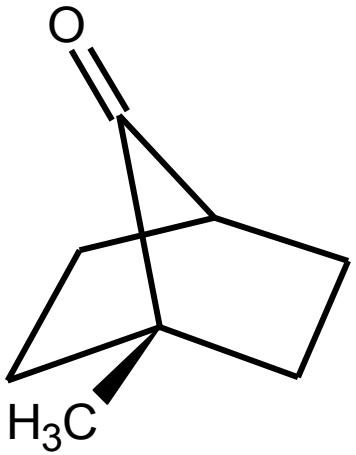


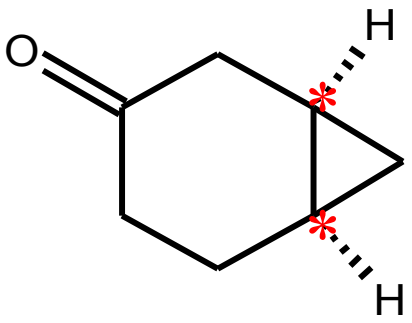
câu c

4. Hợp chất có 2C*?





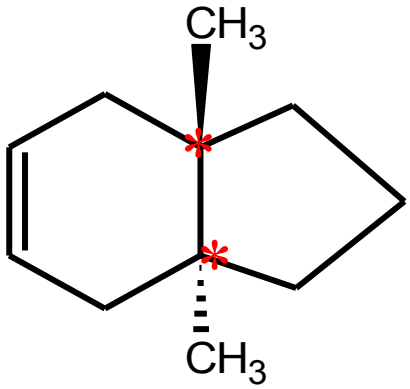




a b c d

Câu d

5. Số C* của hợp chất dưới đây là:



a. 1 b. 2 c. 3 d. 4

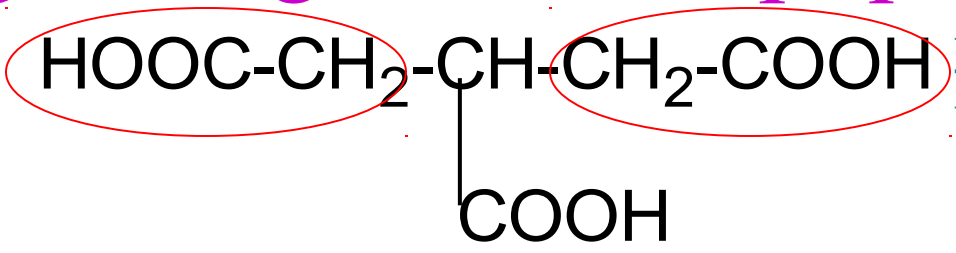
Câu b

6. Axit tartic: HOOC-C*HOH-C*HOH-COOH có bao nhiêu đp quang học?

Câu d

a. 0 b. 2 c. 4 d. 3

Có 2C* tương đương => Có 3 đp quang học

7. Axit citric: 

Đp qh?

Câu a

a. 0 b. 2 c. 4 d. 3

8. Trong các chất: (1): CH_3-CHOH-CH_3

(2): CH_3-$\overset{*}{C}$HOH-CH_2-CH_3

(3): CH_3-$\overset{*}{C}$HNH_2-COOH

(4): CH_2OH-CHOH-CH_2OH

Chất có tính quang hoạt là: Câu c

a. (2) b. (3) c. (2) và (3) d. (4)

9. Chất có tính quang hoạt?

a. 1,2-dibrompropan CH_2Br-CHBr-CH_3

b. 2,2-Dibrompropan: CH_3-$C(Br)_2$-CH_3

c. 1,3-Dibrompropan: CH_2Br-CH_2-CH_2Br

d. 2-Brompropan: Câu a CH_3-CHBr-CH_3

10. Chất có đồng phân lập thể?

(I): Hexen-2 (II): Hexin-1

(III):etylen glycol: (IV): 2,3-butadiol:

a. II và IV b. I và IV

c. II và III d. III và IV

CH_3-CH=CH-CH_2-CH_2-CH_3 Đp hình học

CH≡C-CH_2-CH_2-CH_2-CH_3

CH_2OH-CH_2OH

CH_3-C*HOH-C*HOH-CH_3 Đp quang học

Câu b

11. Chất có đồng phân lập thể?

Alanin(A): CH_3-CHNH_2-COOH Đp qh

Glixerin(B): CH_2OH-CHOH-CH_2OH

Axit lactic(C): CH_3-CHOH-COOH Đp qh

Penten-1(D): CH_2=CH-CH_2-CH_2-CH_3

Penten-2(E):CH_3-CH=CH-CH_2-CH_3 Đp hh

a. Cả 5 chất

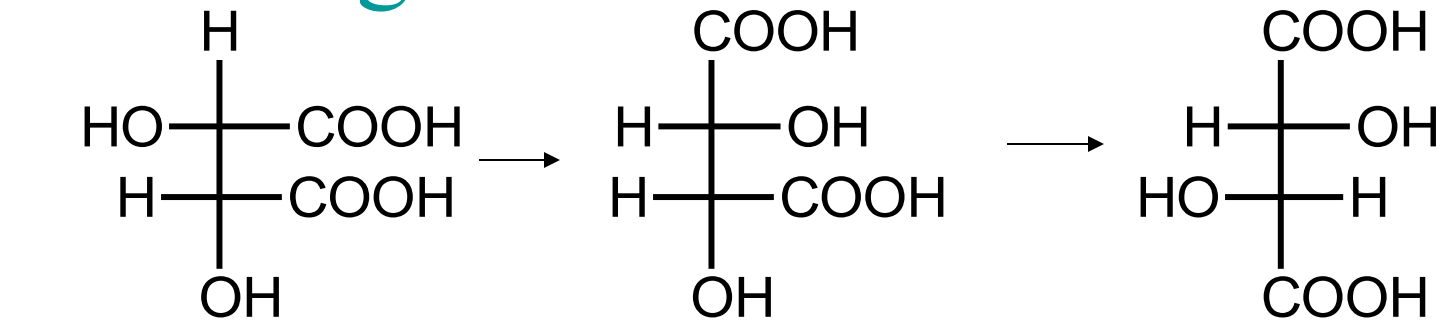
b. (A), (B), (C)

c. (A), (B), (C), (E)

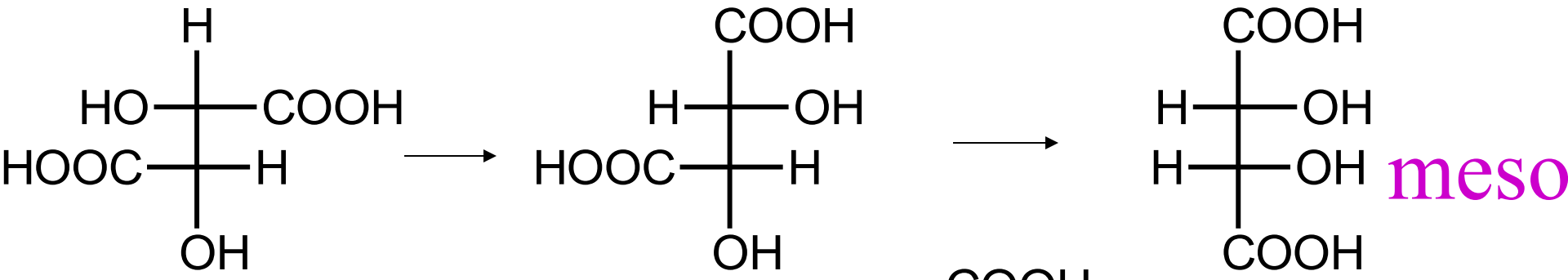
d. (A), (C), (E)

Câu d

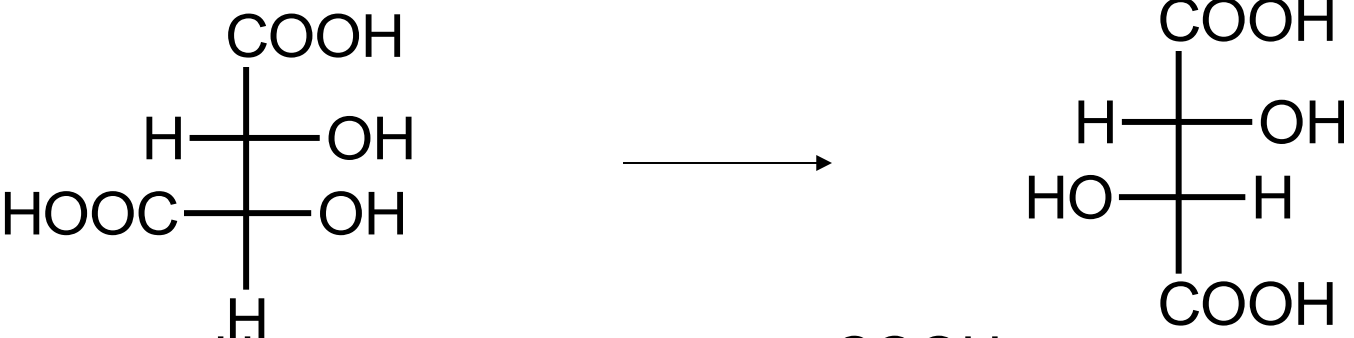
12. Công thức của axit meso tartic là:



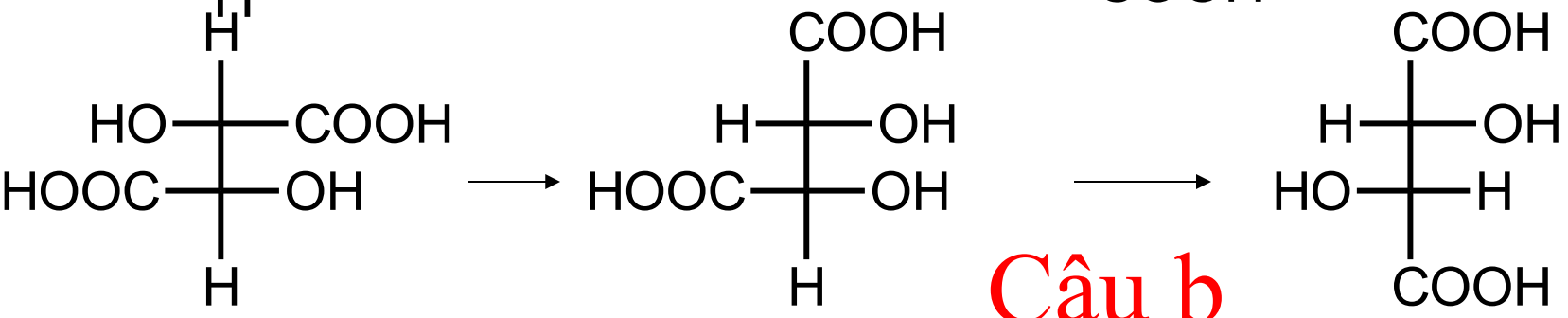
Treo



meso



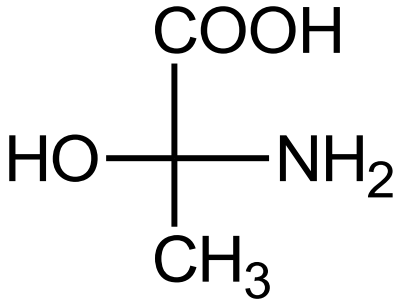
Treo

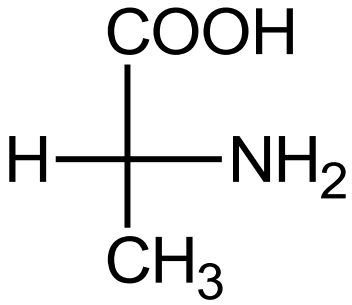


Treo

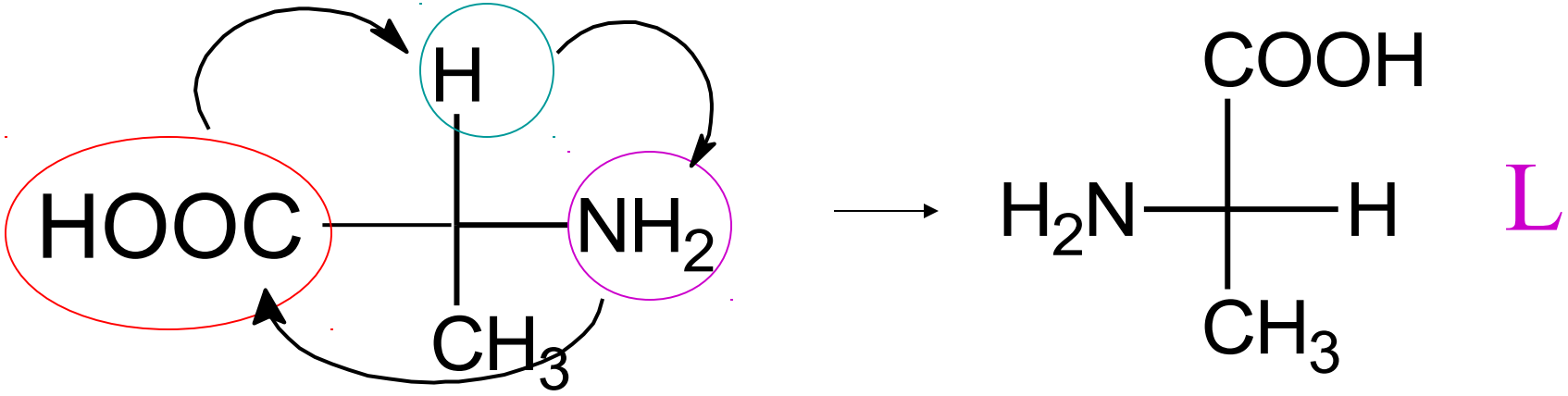
Câu b

13. Công thức L-Alanin:

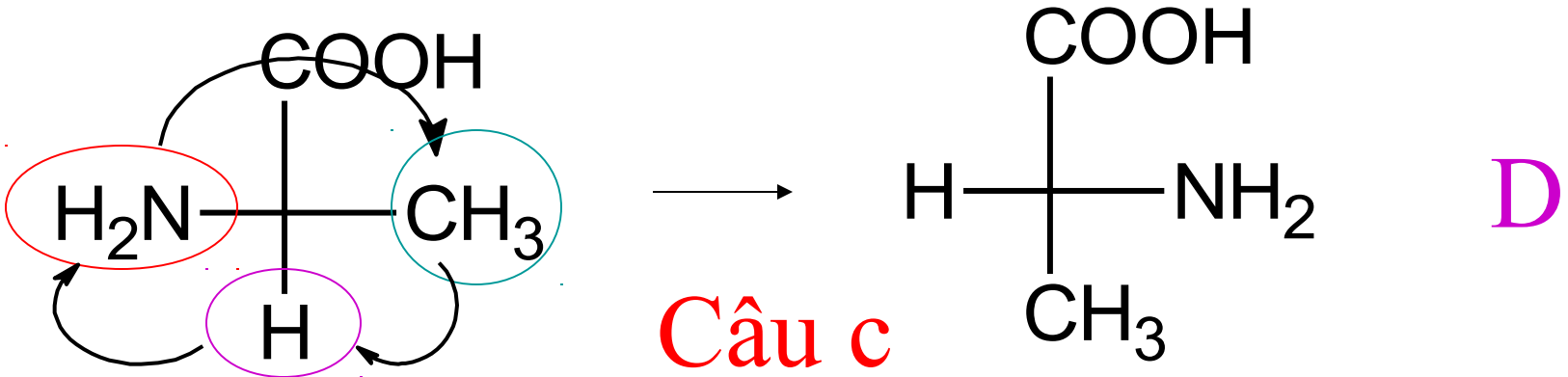
a. 

b. 

(D)

c. 

L

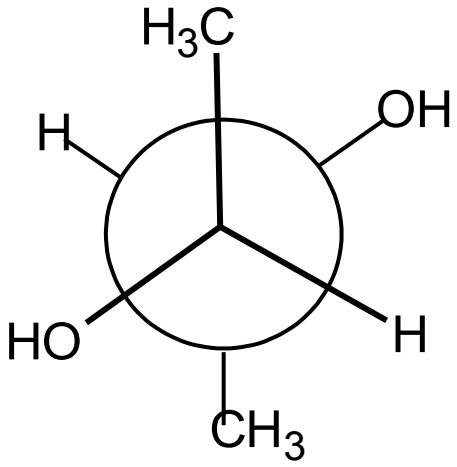
d. 

D

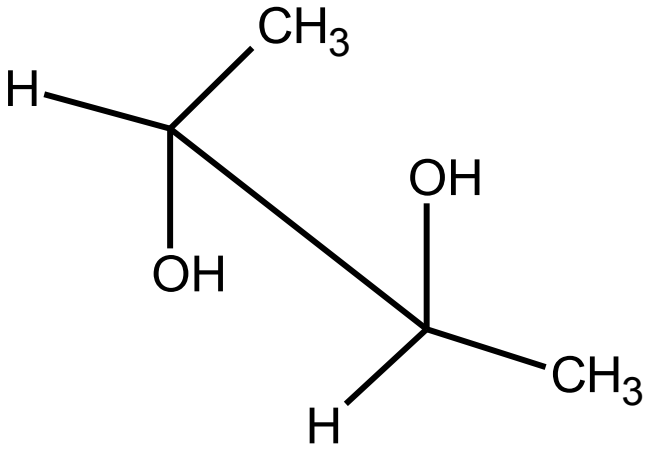
Câu c

14. Hợp chất meso?

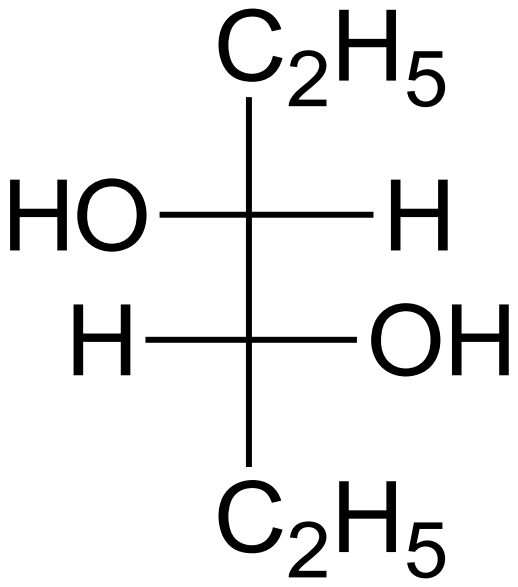
a.



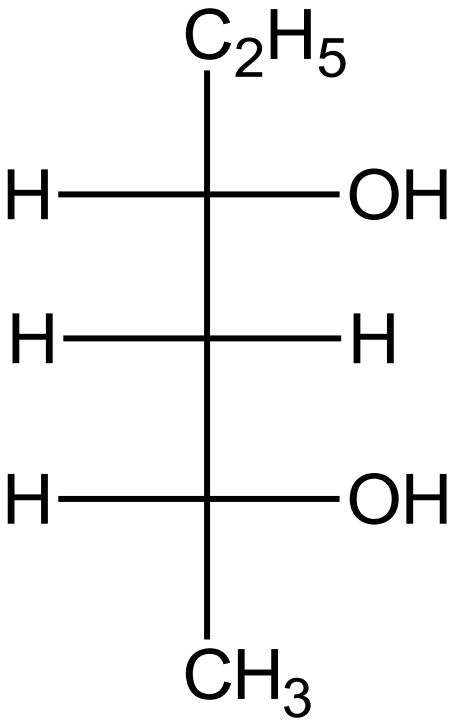
b.



c.

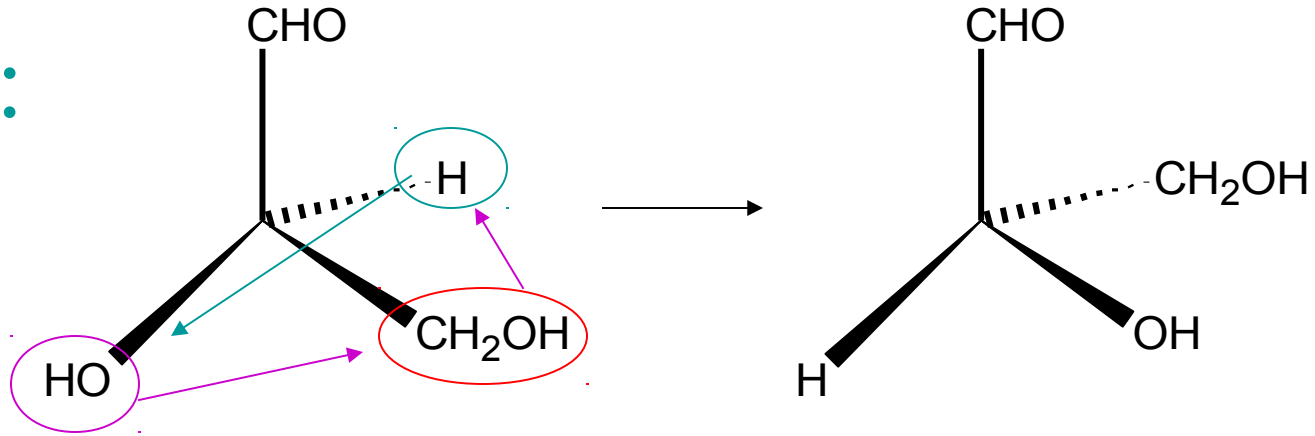


d.



Câu a

15. Gọi tên:

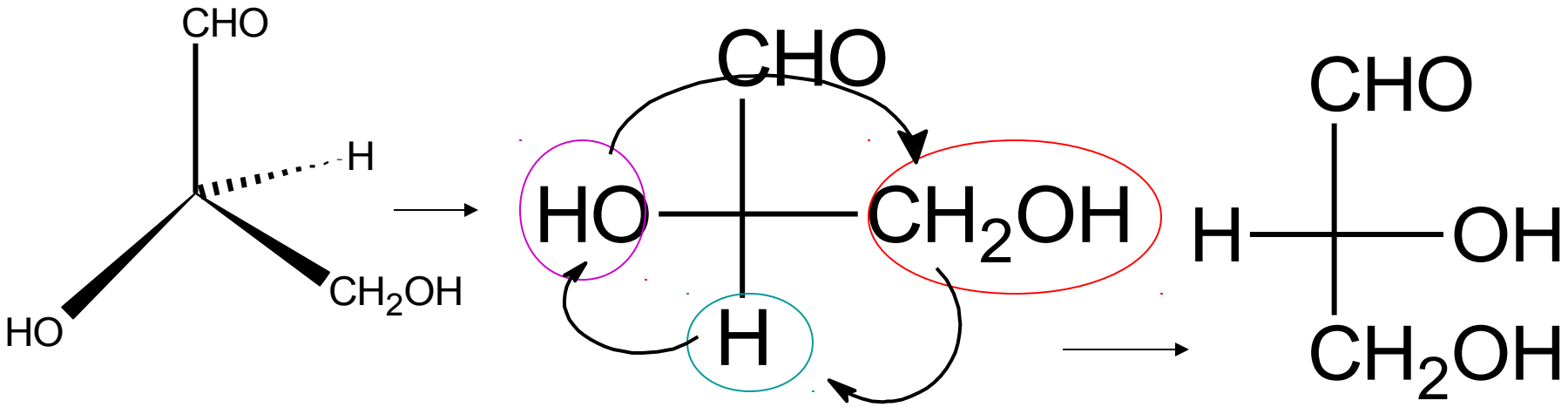


a. D-Gliceraldehid

b. D-Serin

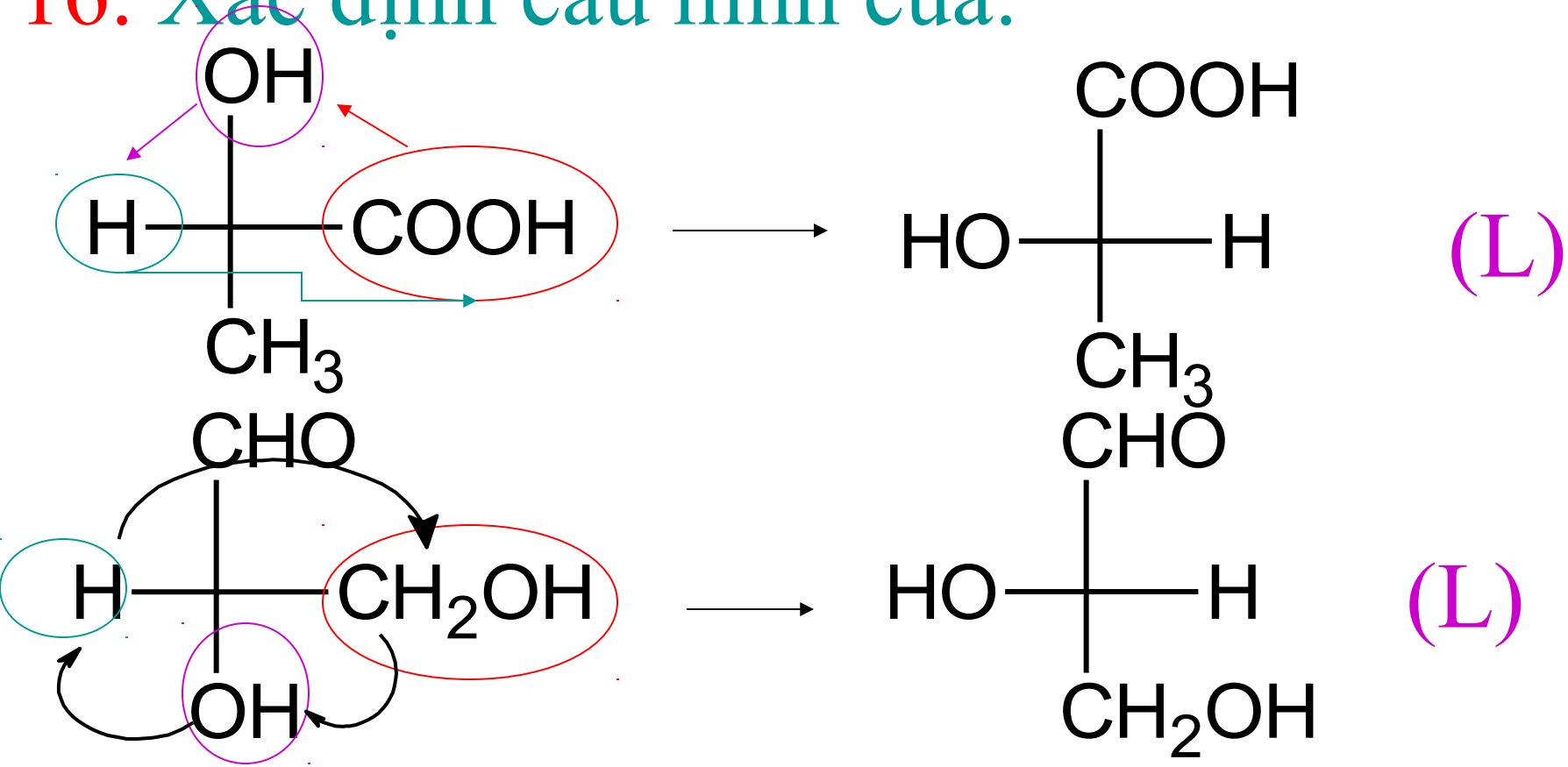
c. L-Gliceraldehid

d. L-Serin



Câu a

16. Xác định cấu hình của:



a. (A),(B) đều cấu hình L

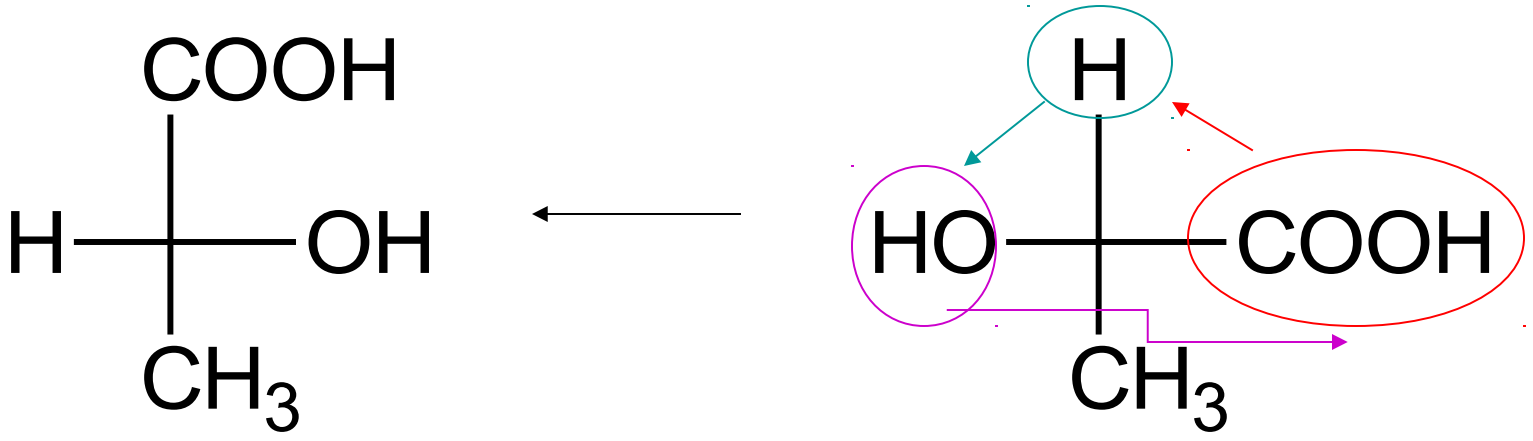
b. (A) cấu hình L, (B) cấu hình D

c. (A) (B) đều cấu hình D

d. (A) cấu hình D, (B) cấu hình L

Câu a

17. 2 chất:



a. 2 chất đối hình

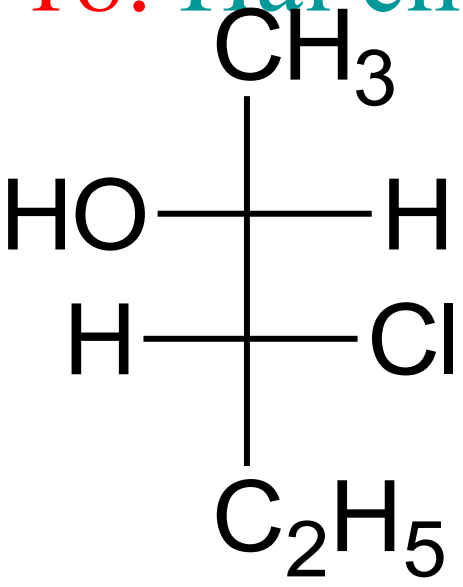
b. Hỗn hợp tiêu triền

c. Chỉ là 1 chất

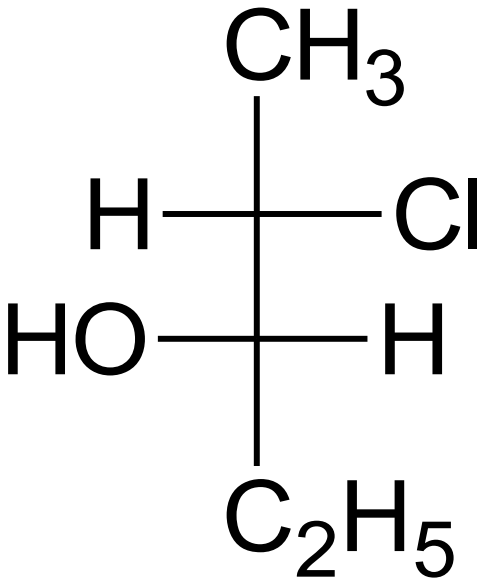
d. a và b đều đúng

Câu c

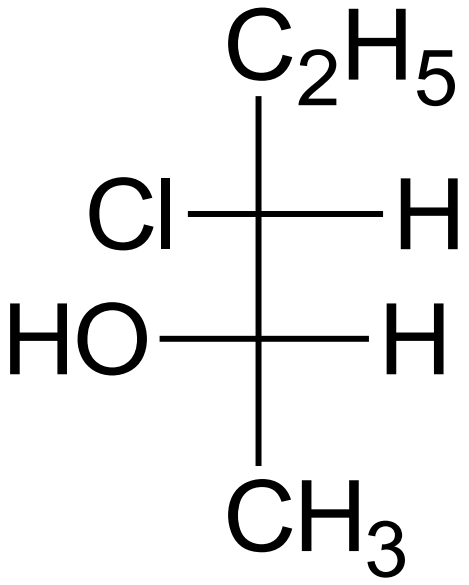
18. Hai chất đối hình?



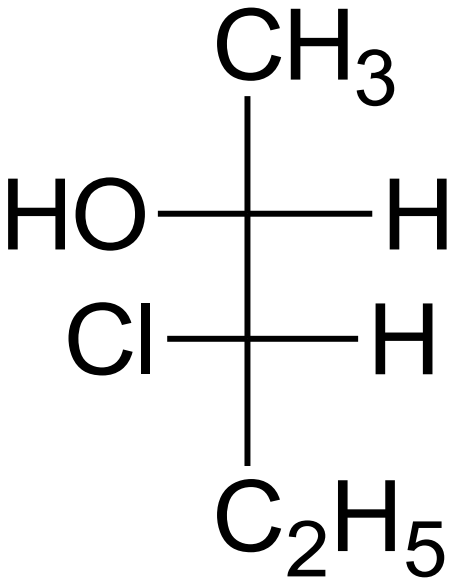
I



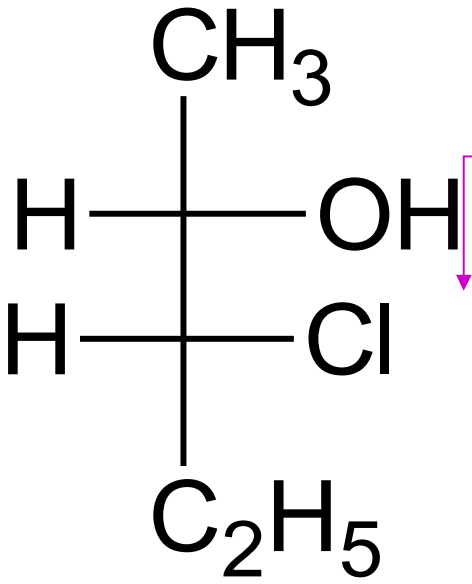
II



III



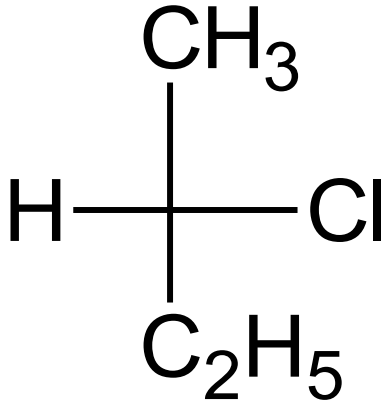
IV



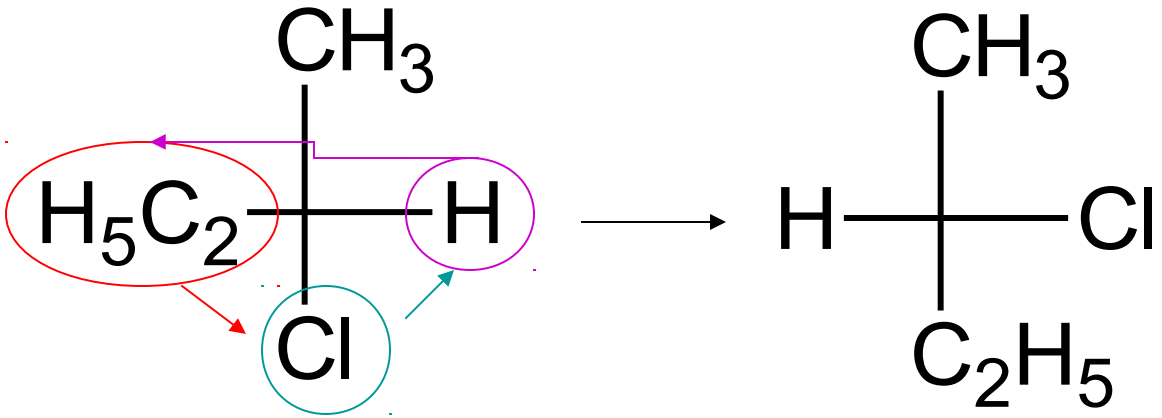
Quay 180° trong mp

Câu b

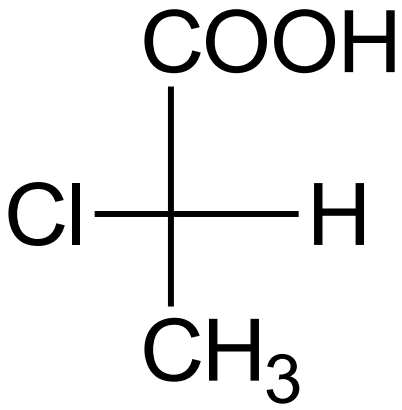
19. Cho 2 cặp chất: chọn phát biểu đúng



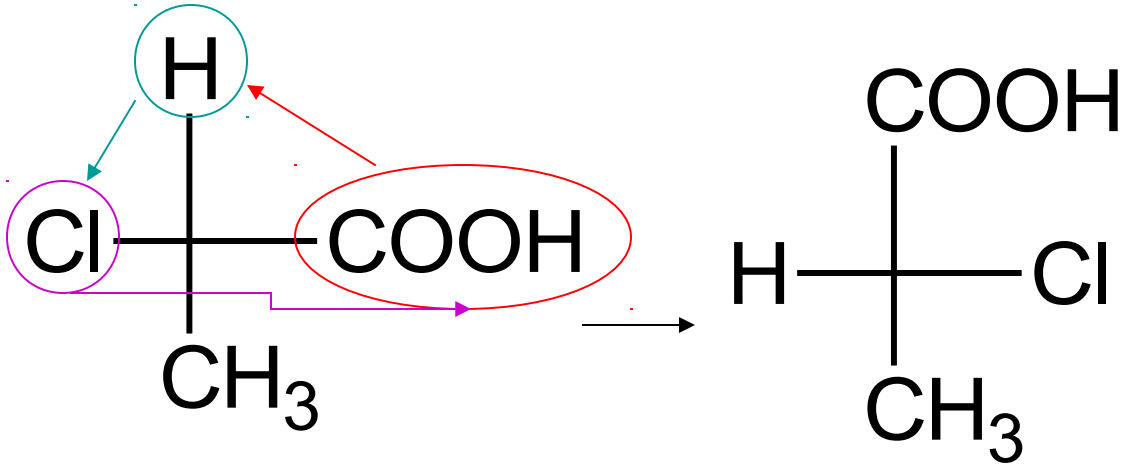
(I)



(II) (I) và (II):1 chất



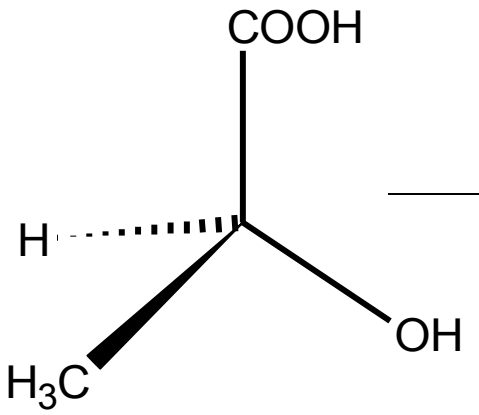
(III)

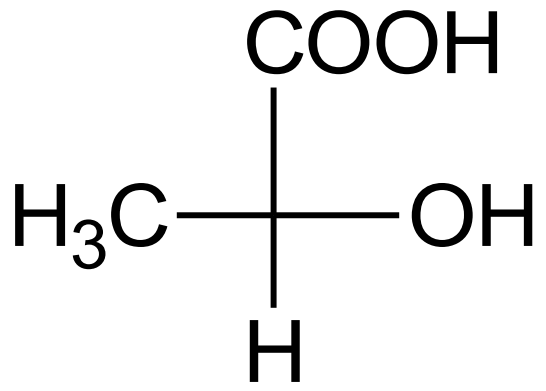


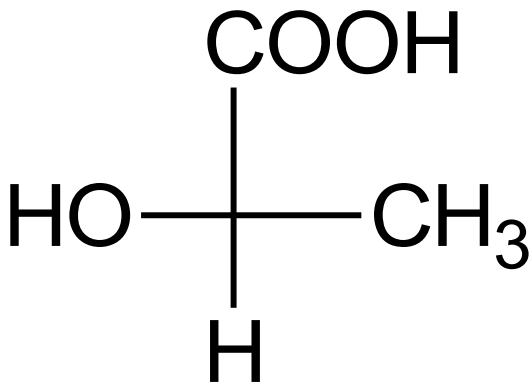
(IV) (III) Và (IV):đối hình

Câu a

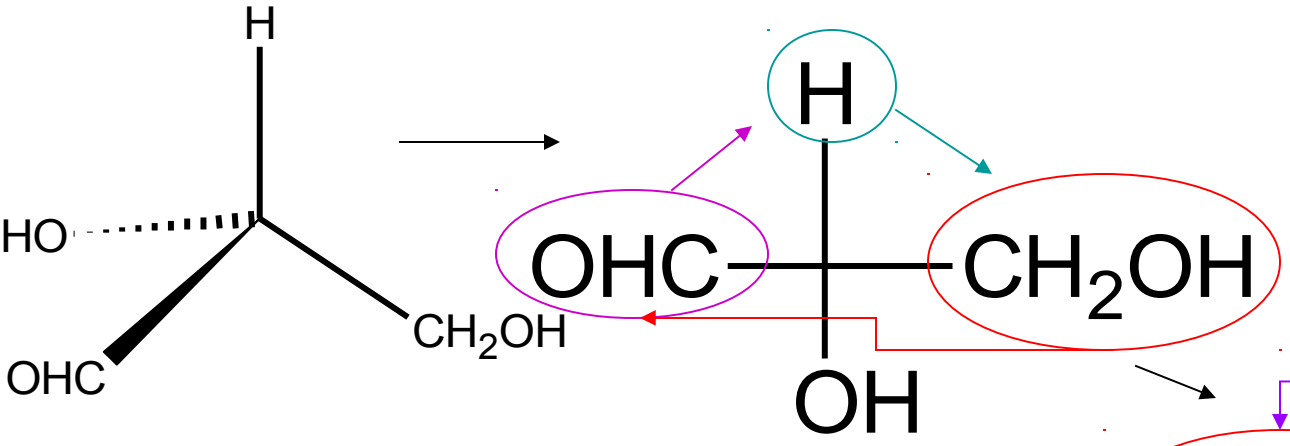
20. Cho 2 cặp chất, chọn phát biểu đúng

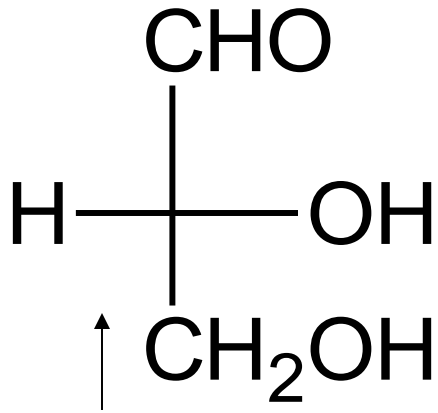




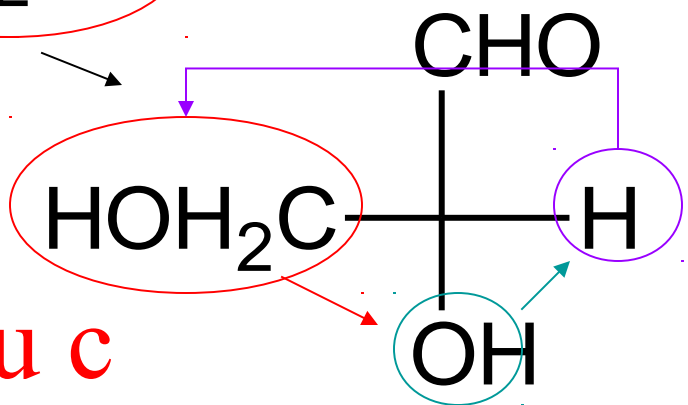


(I)và (II):đối hình



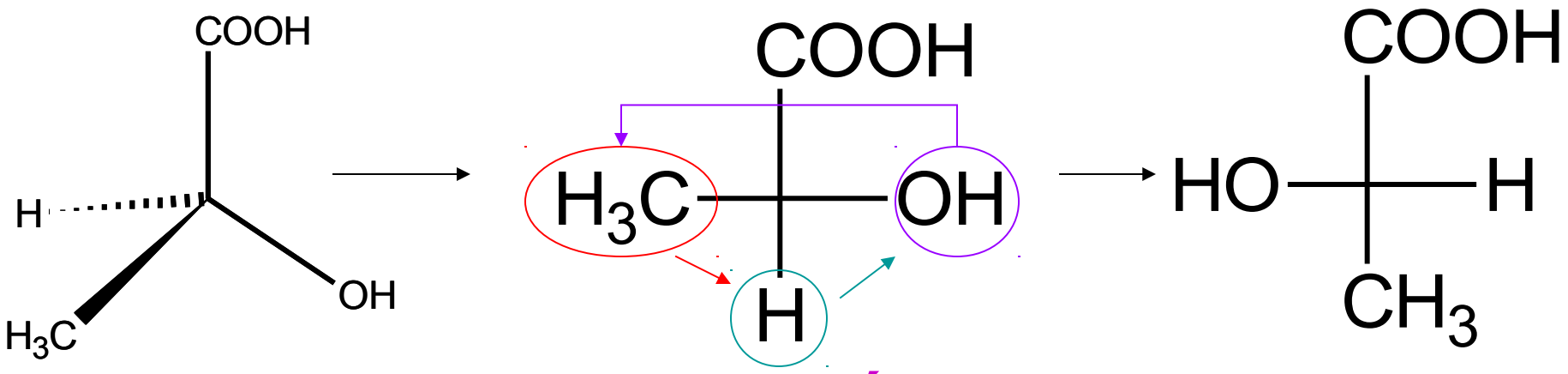


(III) và (IV): 1 chất

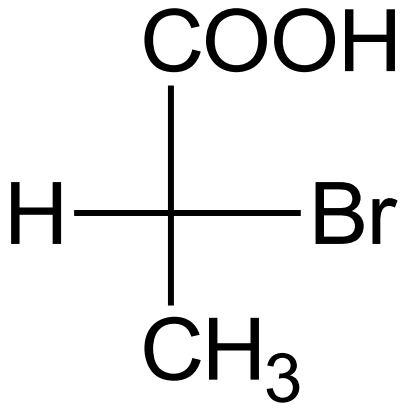


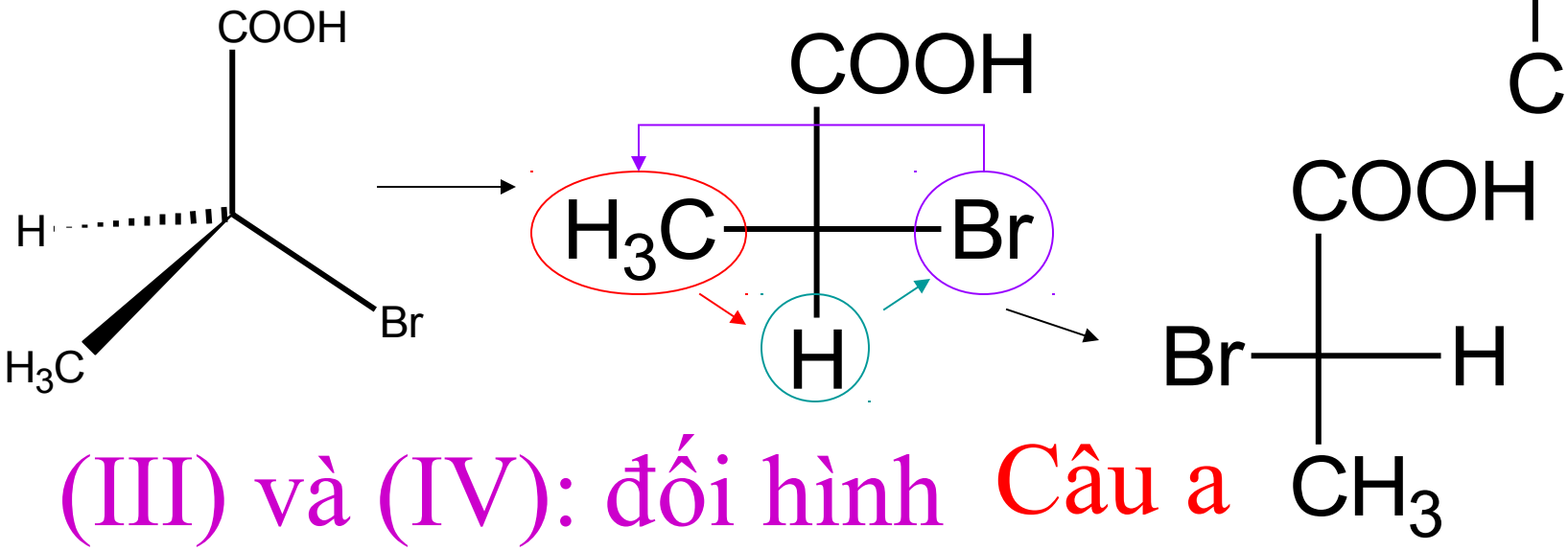
Câu c

21. Cho 2 cặp chất; chọn phát biểu đúng



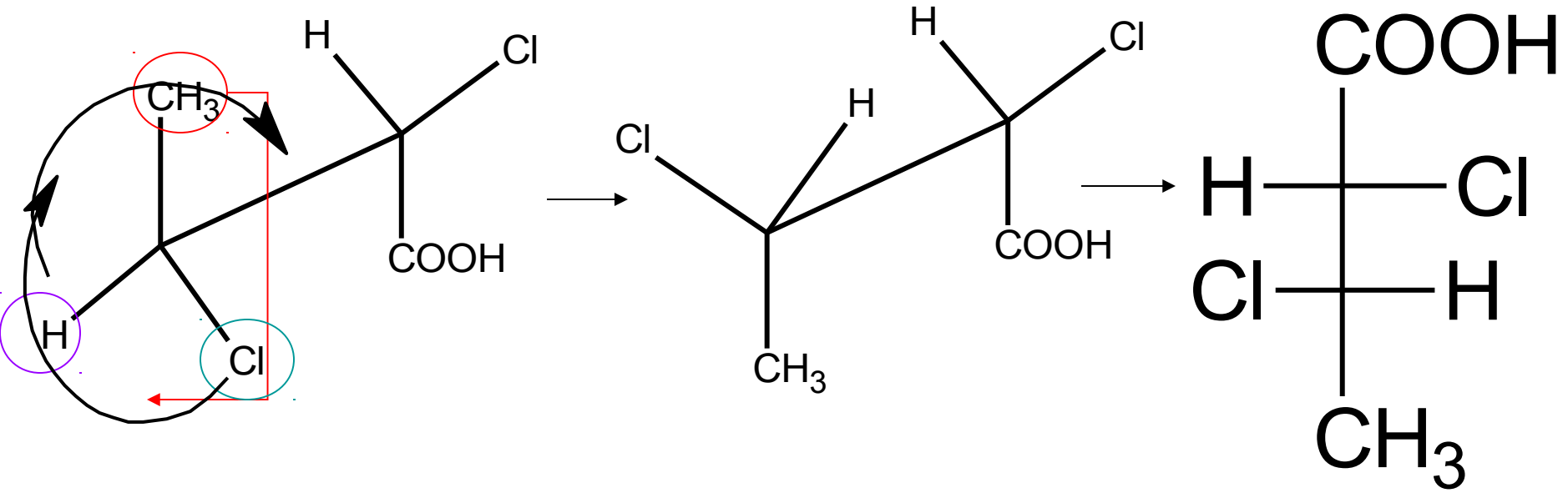
(I) và (II): là 1 chất

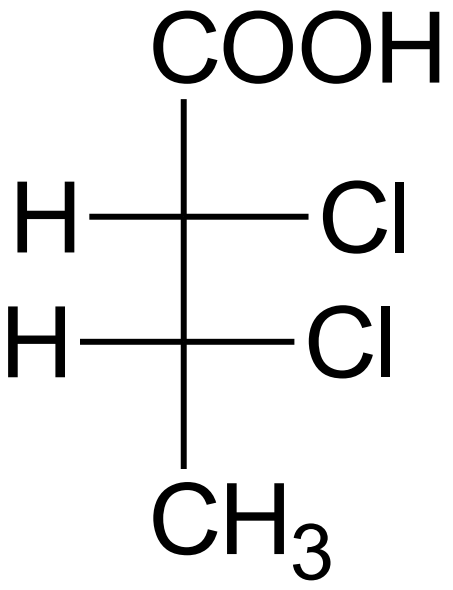




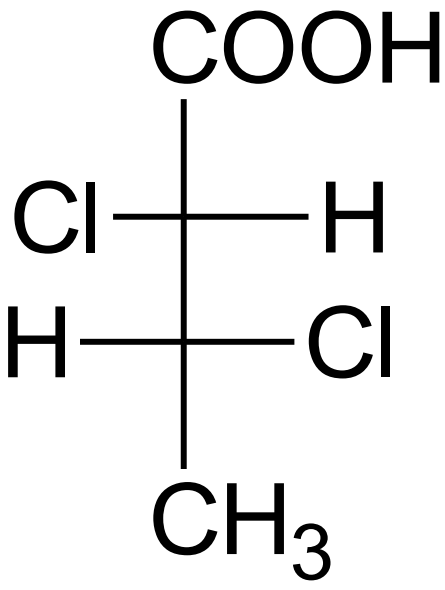
(III) và (IV): đối hình Câu a

22. Công thức chiếu Fischer đúng của:



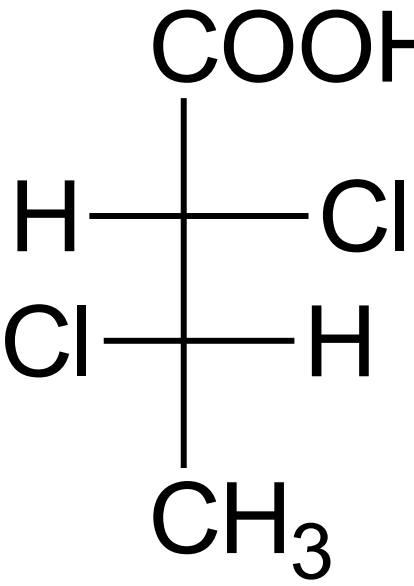


(I)

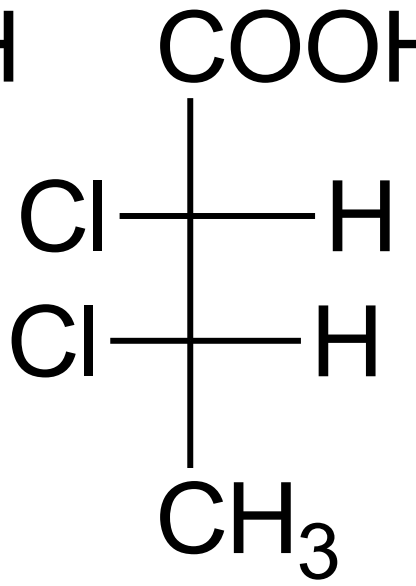


(II)

Câu c

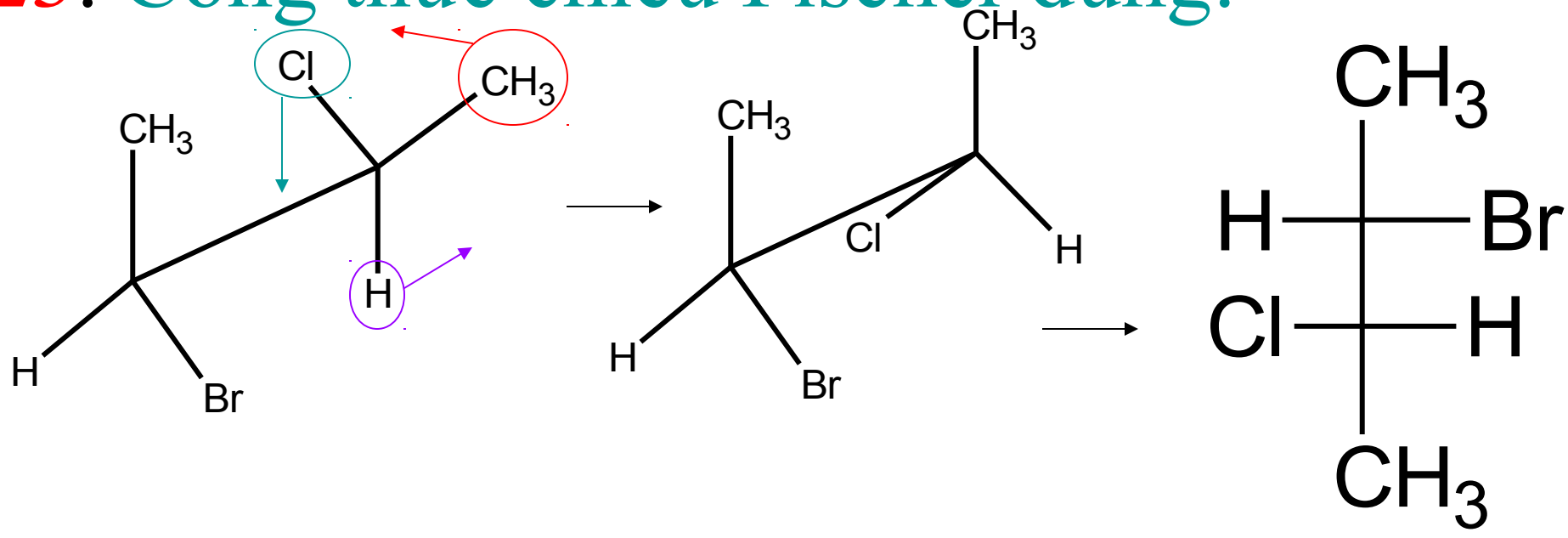


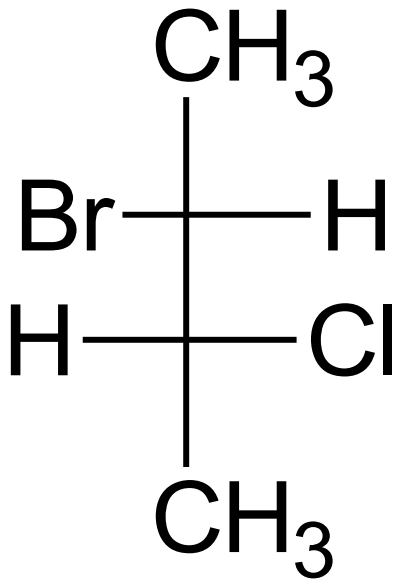
(III)

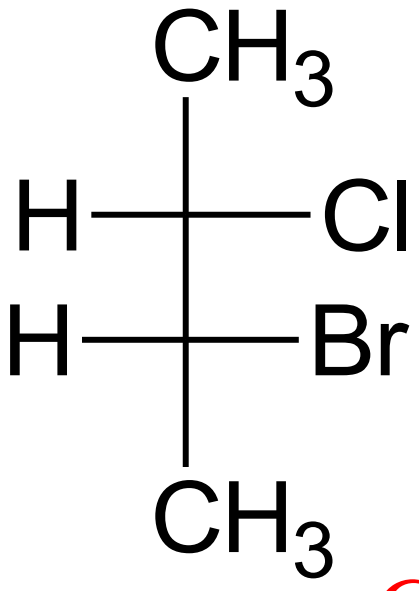


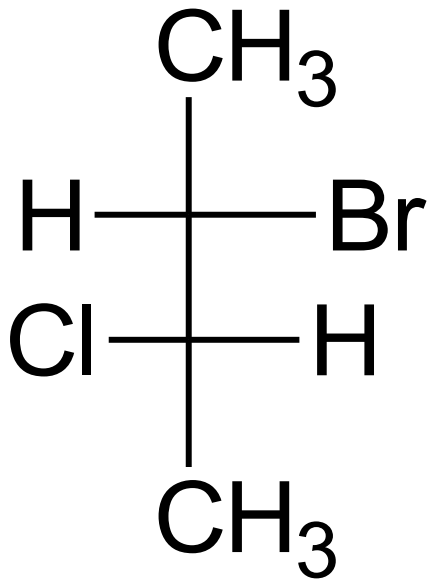
(IV)

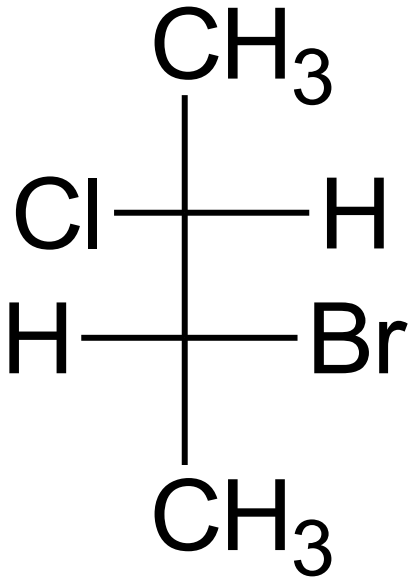
23. Công thức chiếu Fischer đúng:





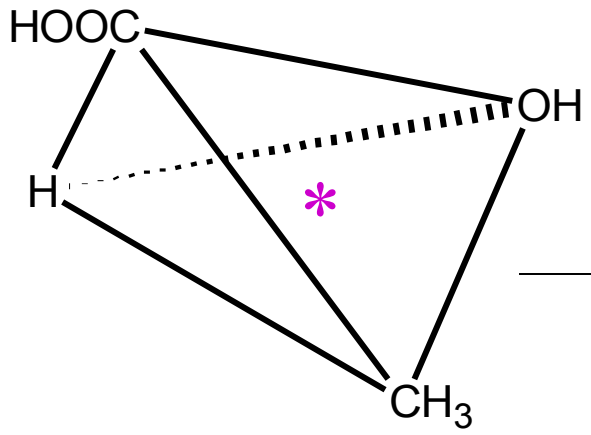


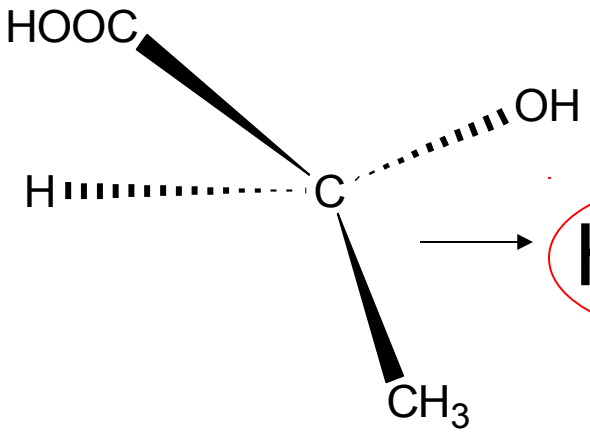


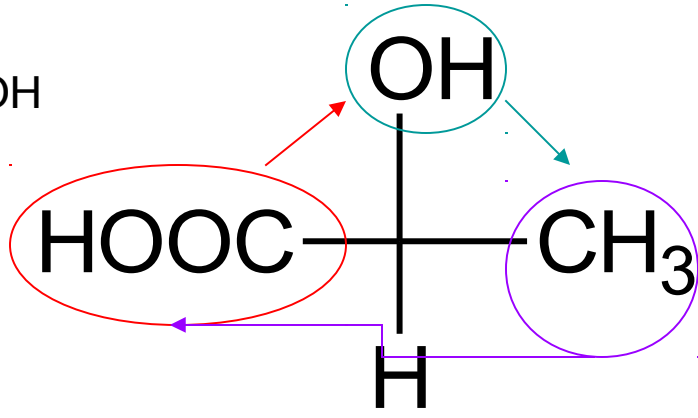


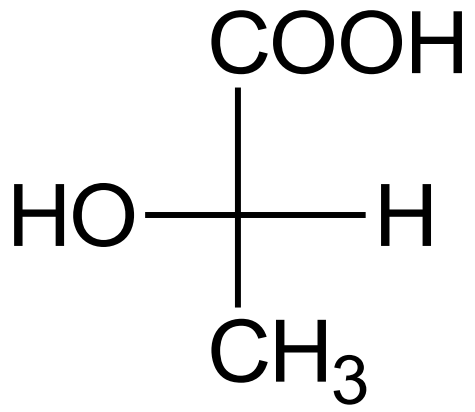
Câu c

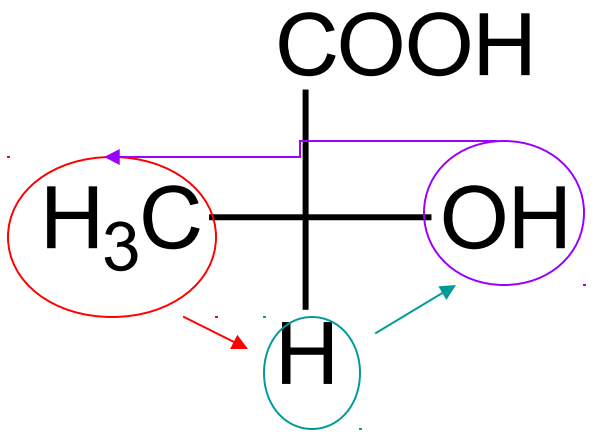
24. Cho 2 chất; chọn phát biểu đúng



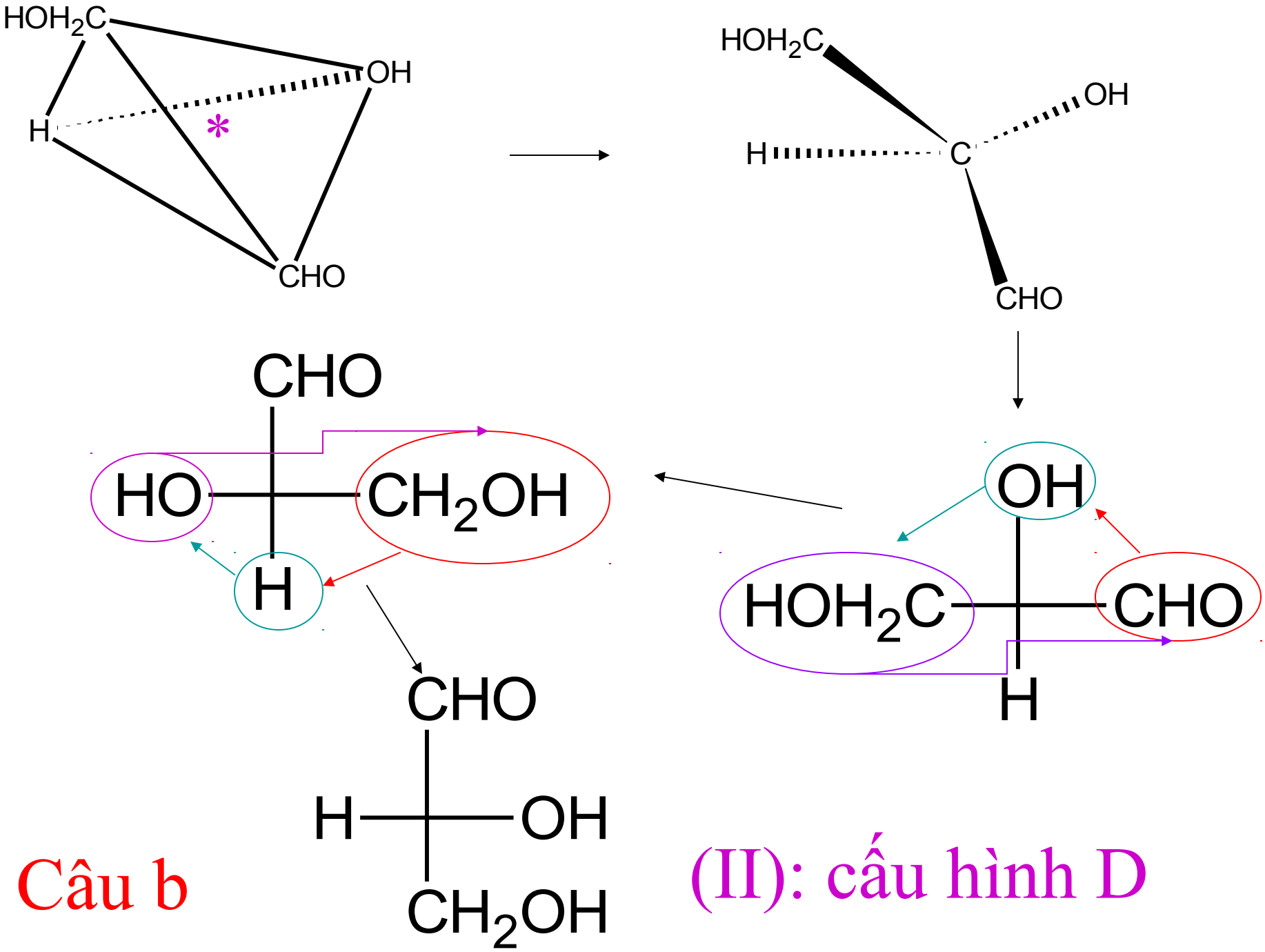




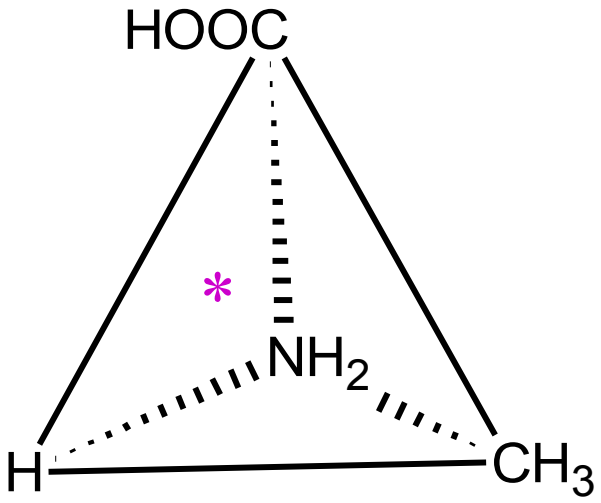


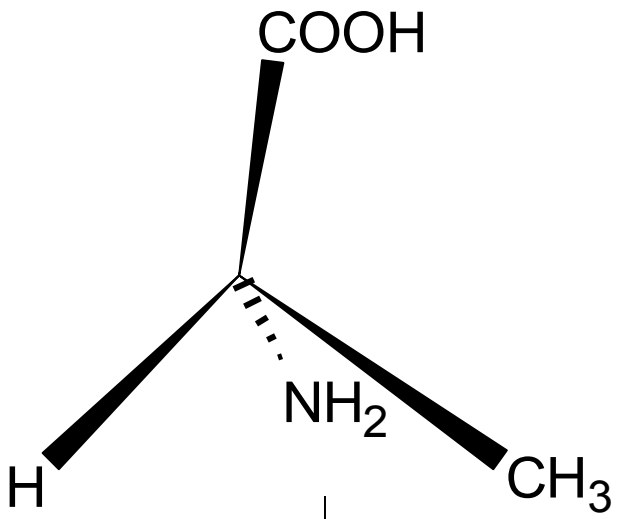


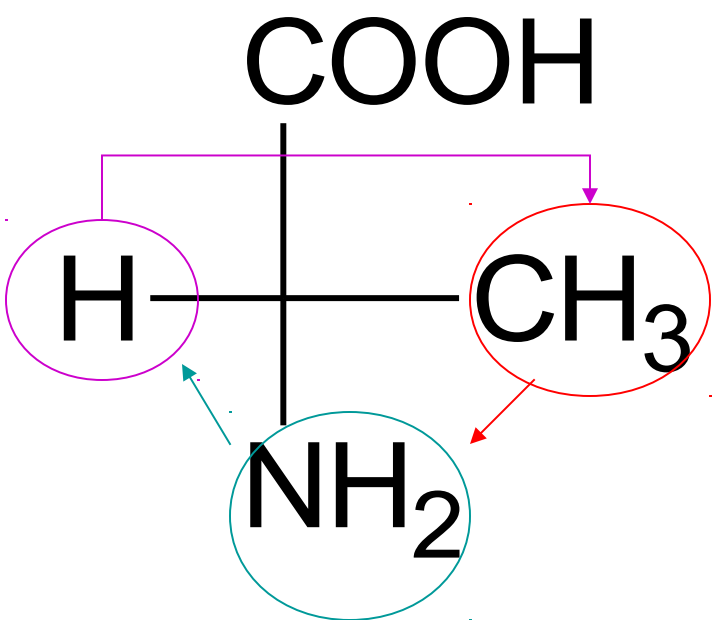
(I) Cấu hình L

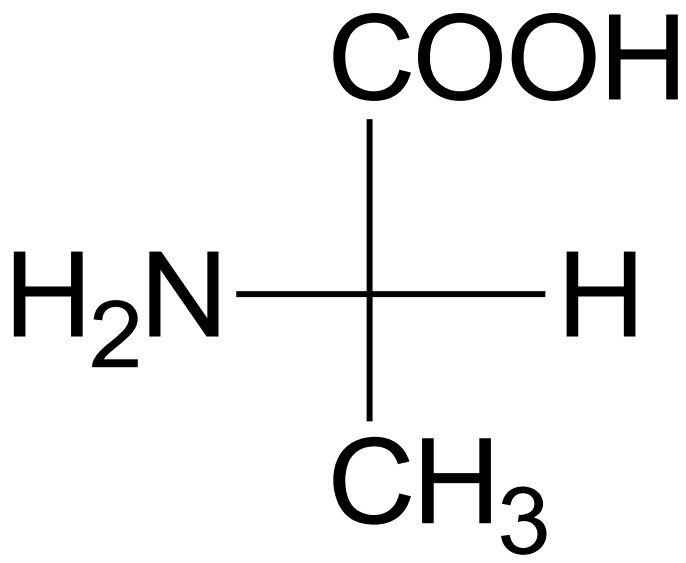

HOH2C
OH
H
*
CHO
HOH2C
OH
H
C
CHO
CHO
HO
CH2OH
H
OH
HOH2C
CHO
H
CHO
H
OH
CH2OH
Câu b
(II): cấu hình D

25. Cho 2 chất, chọn phát biểu đúng

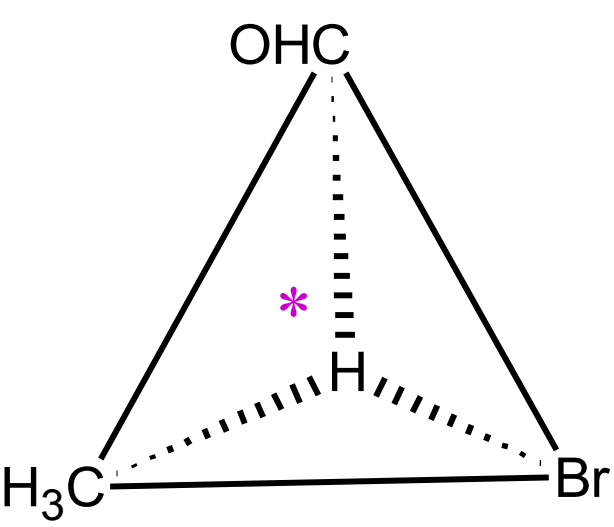


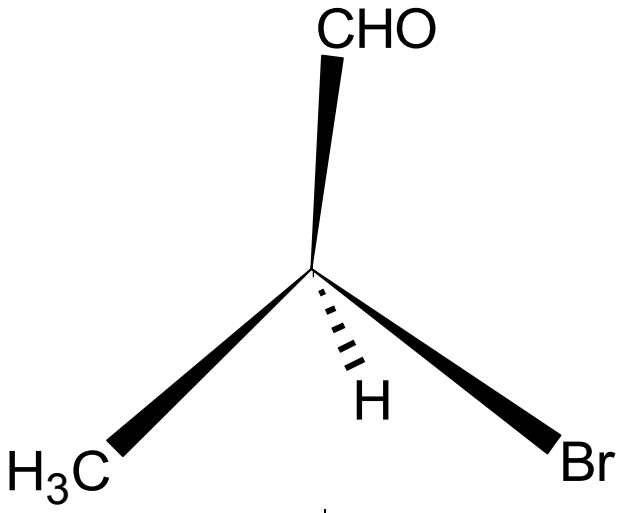


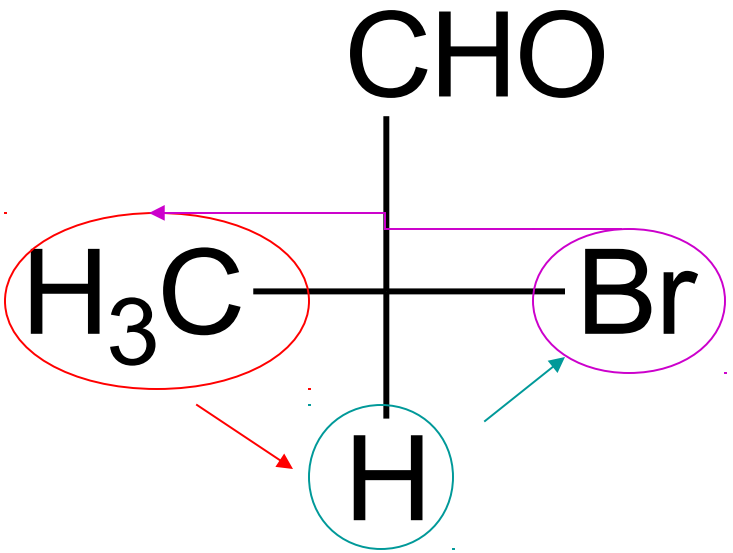


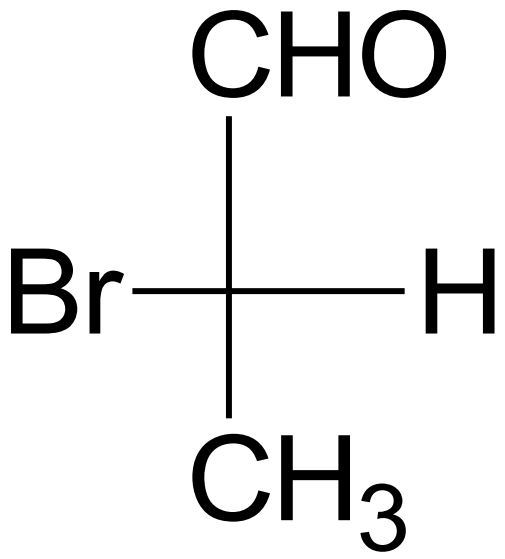


(I): cấu hình L





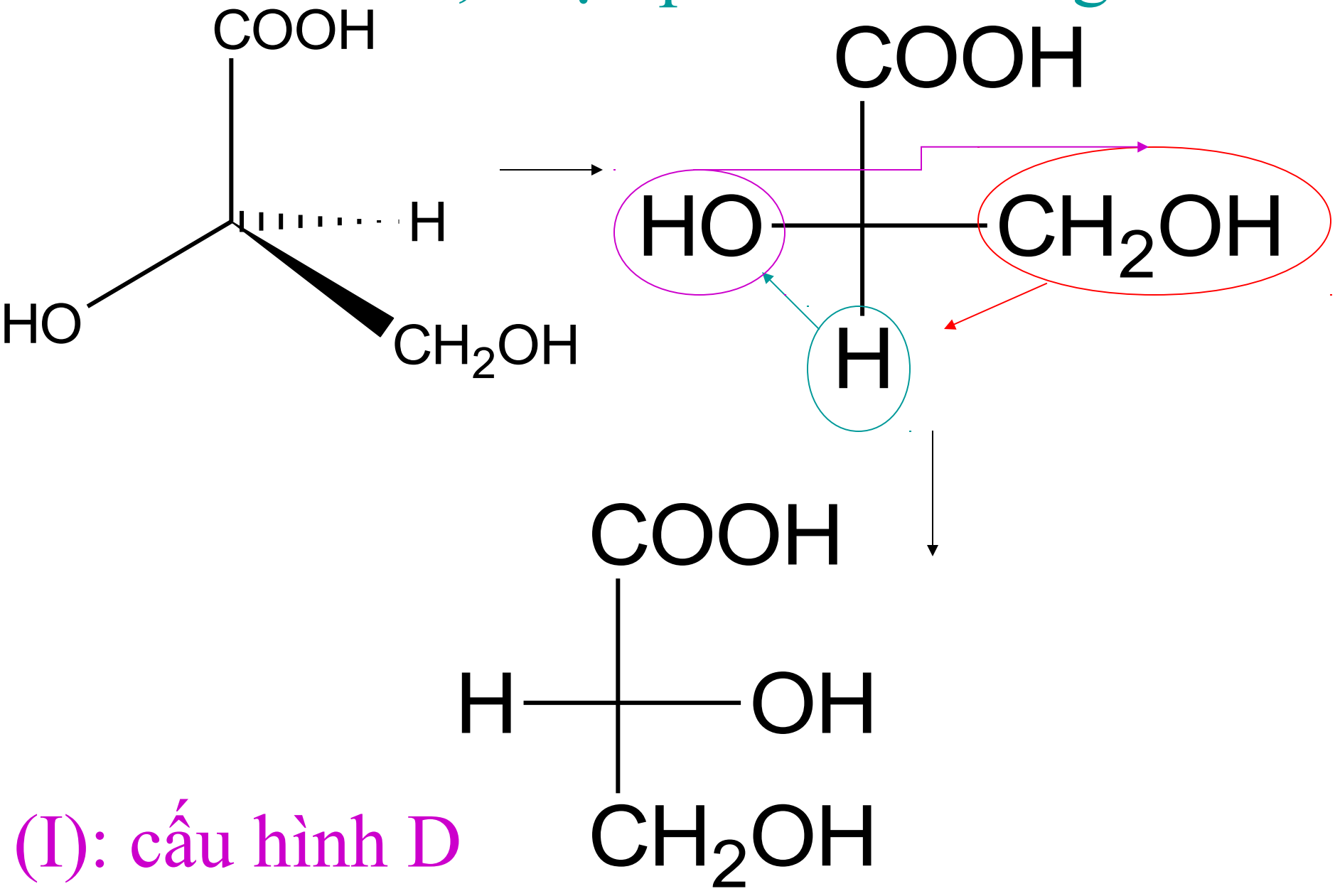




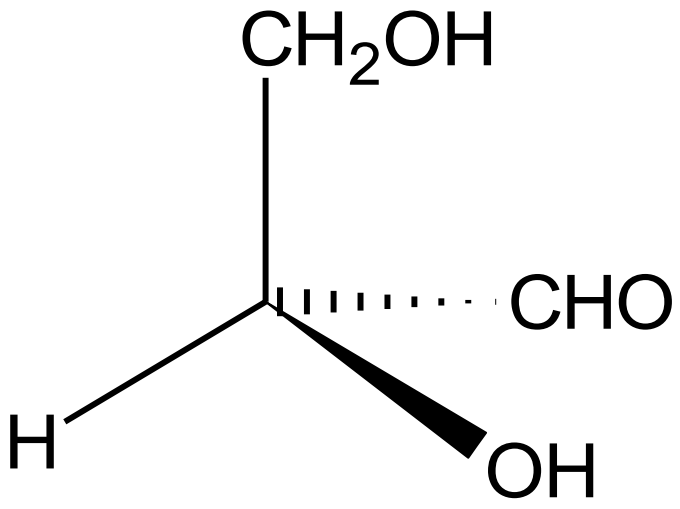
(II): cấu hình L

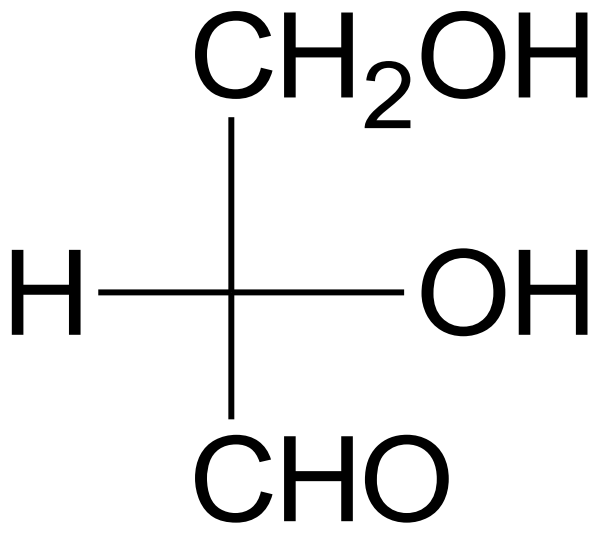
Câu d

26. Cho 2 chất, chọn phát biểu đúng

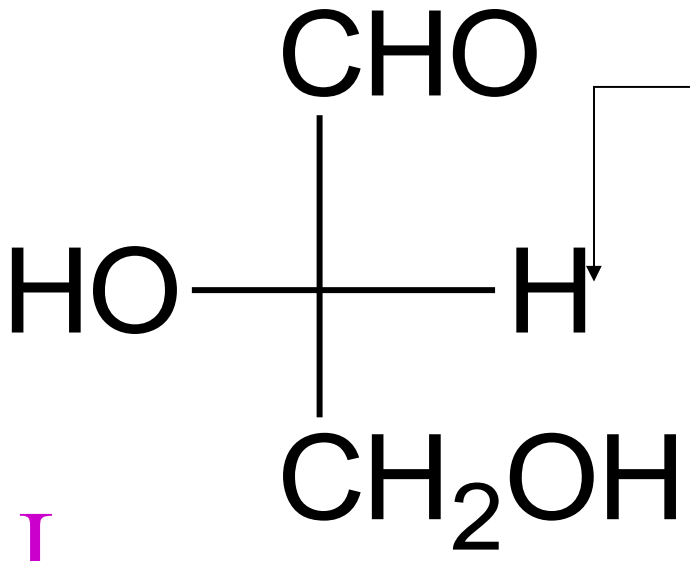


(I): cấu hình D





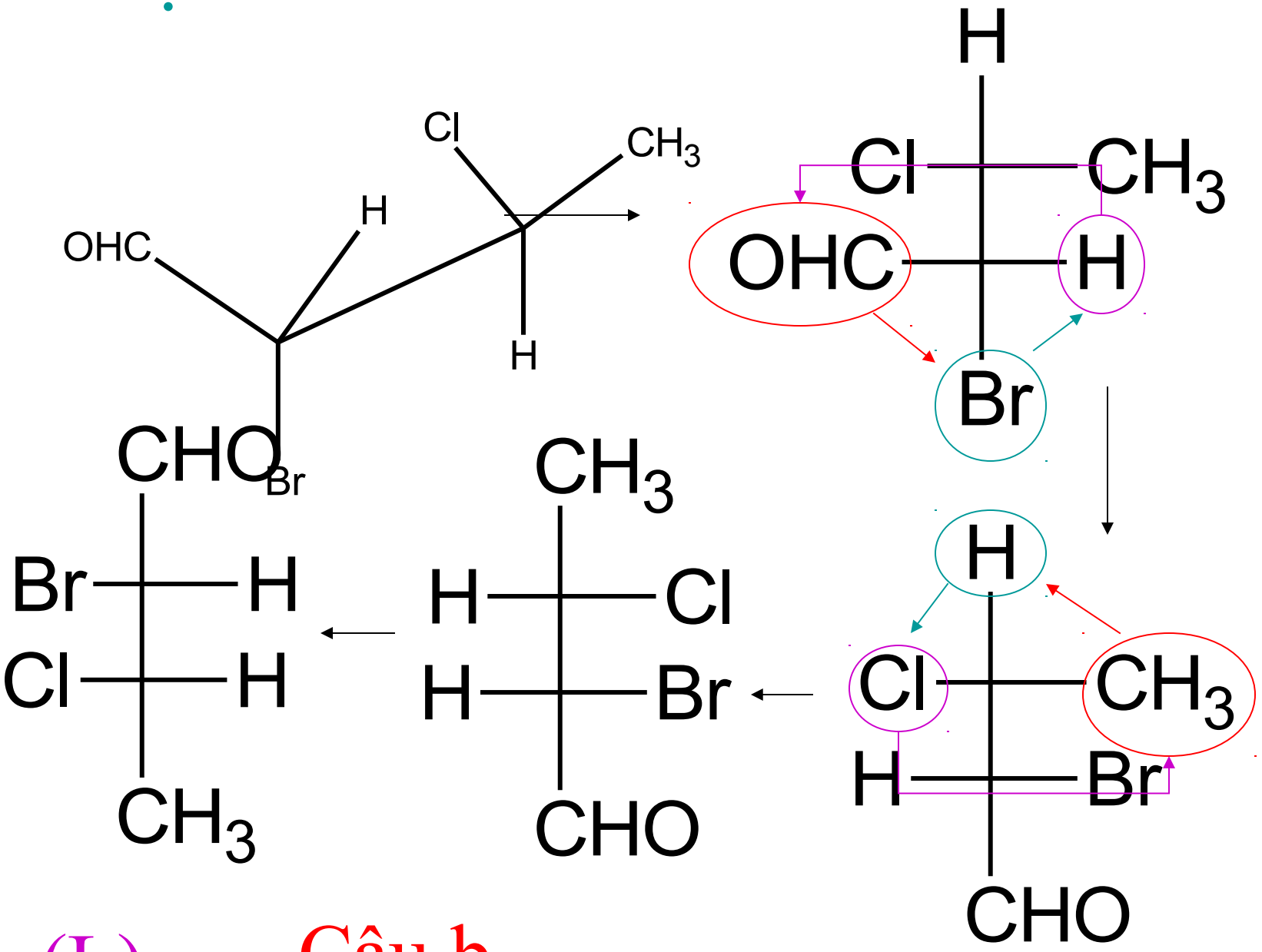
Quay 180° trong mp



(II): cấu hình L

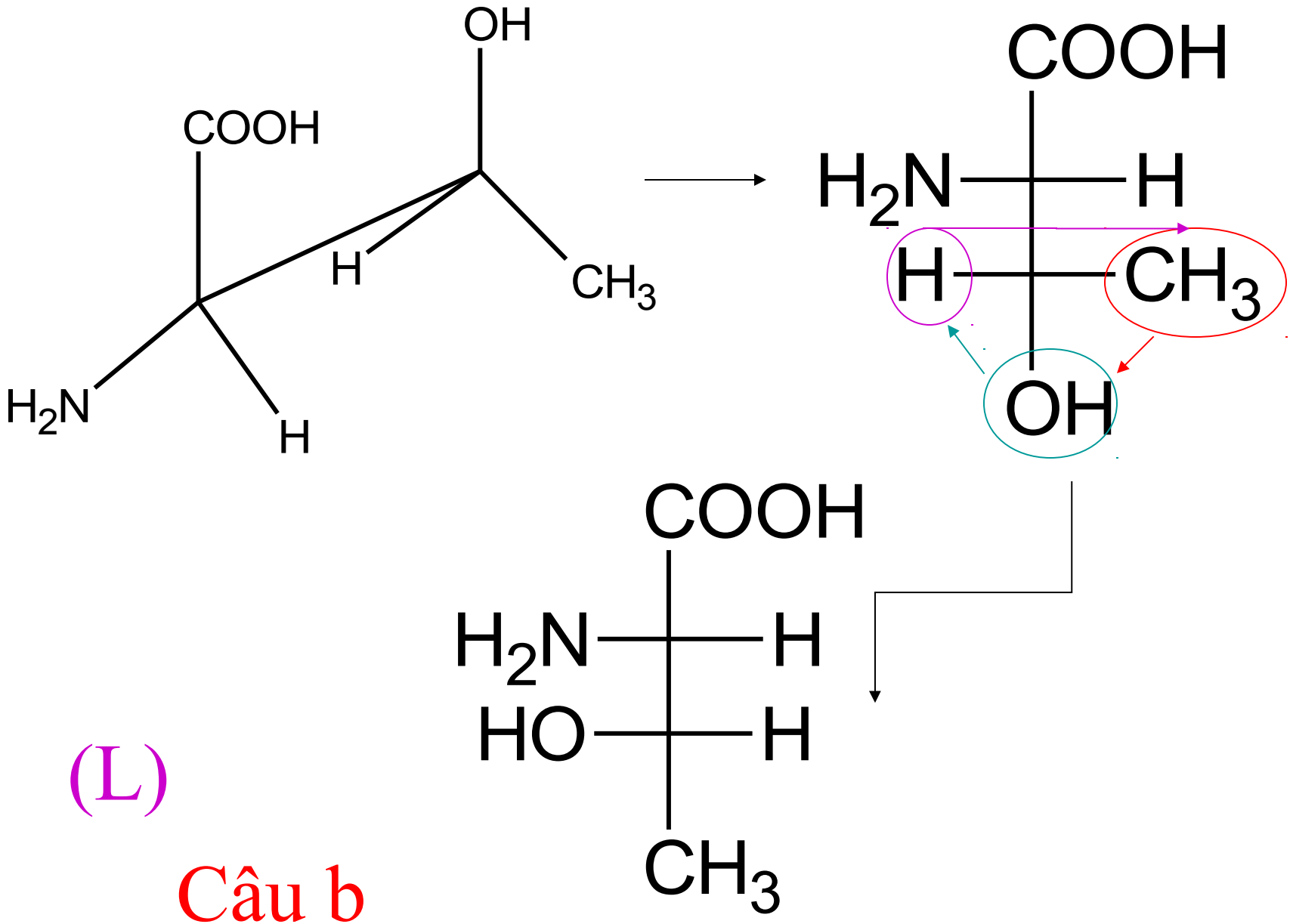
Câu c

27. Đọc tên cấu hình của:



(L) Câu b

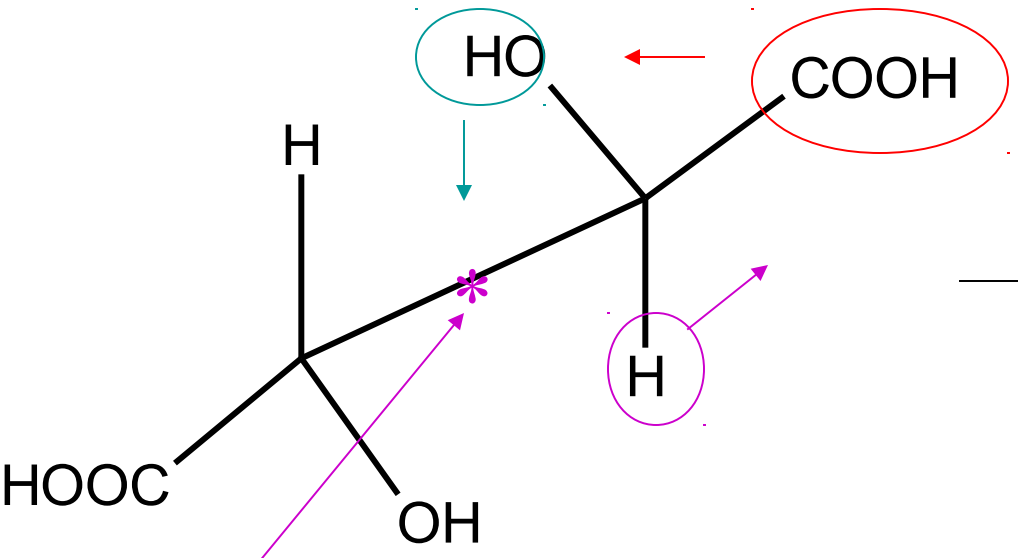
28. Đọc tên cấu hình của:

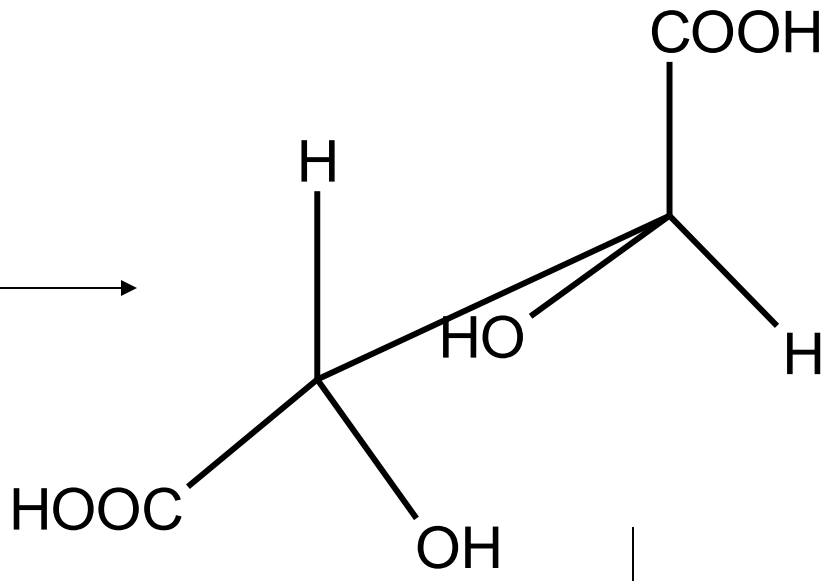


(L)

Câu b

29. Đọc tên cấu hình của:

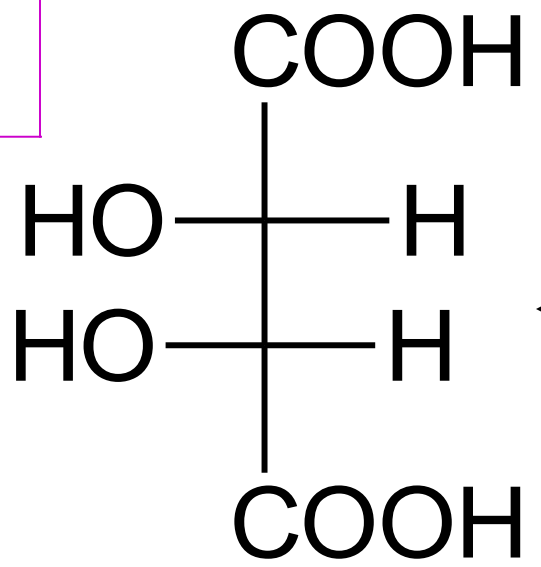


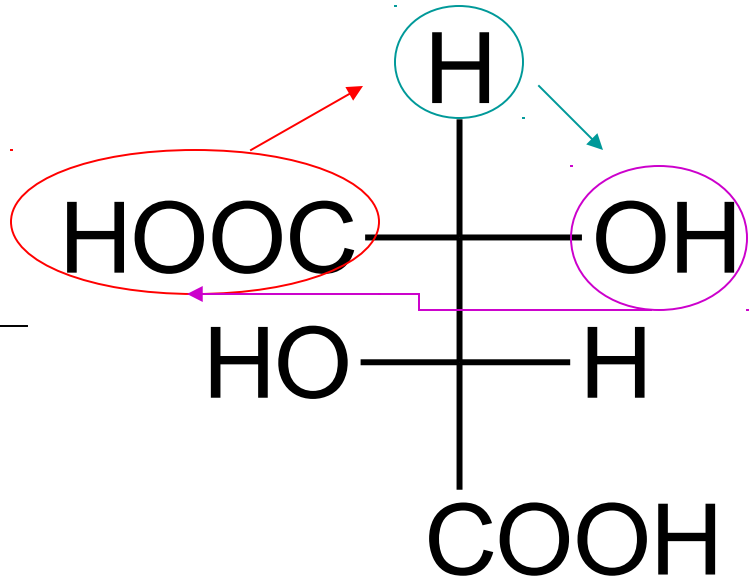


Tâm đối xứng

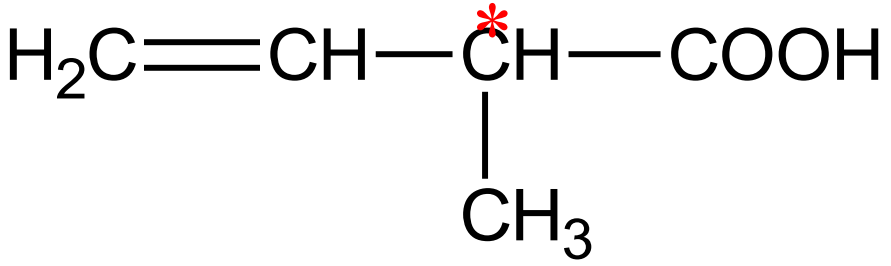
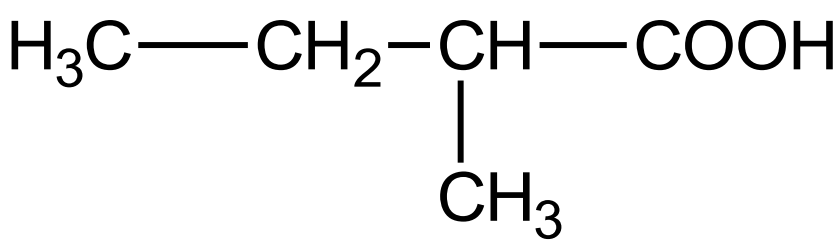
meso

Câu d

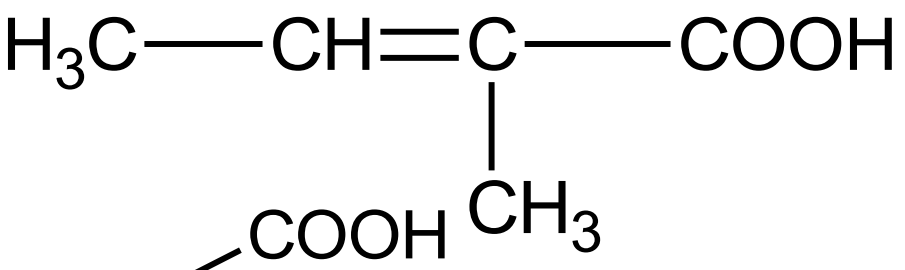
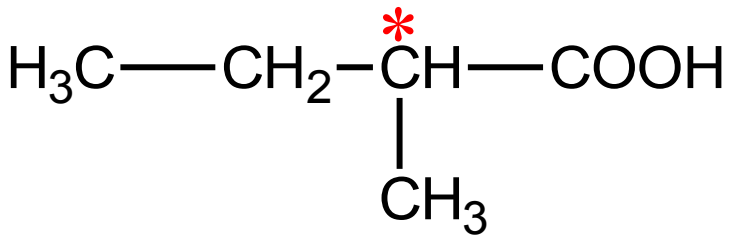


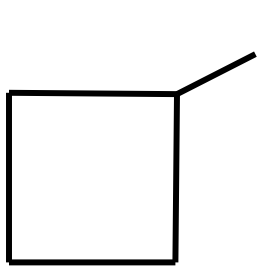


30. Axit A($C_5H_8O_2$) có thể ở 2 dạng không có tính triền quang. Hidro hóa A cho B($C_5H_{10}O_2$) có thể tách làm 2 chất đối hình. CTCT của A và B?

a.  

b. CH_3-CH=CH-CH_2-COOH CH_3-CH_2-CH_2-CH_2-COOH

c.  

d. 

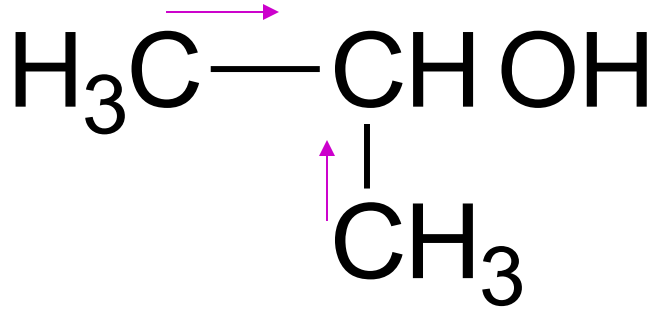
CH_3-CH_2-CH_2-CH_2-COOH

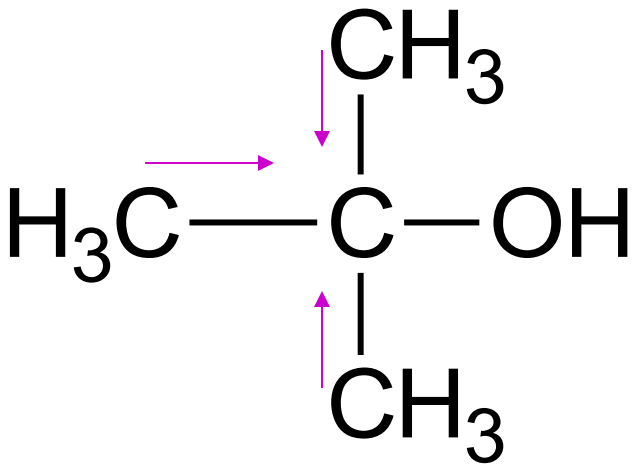
Câu c

Hiệu ứng điện tử

39. So sánh tính axit: (I) $CH_3CH_2CH_2OH$, (II) $CH_3CHOHCH_3$, (III) $(CH_3)_3COH$

CH_3-CH_2-CH_2-OH



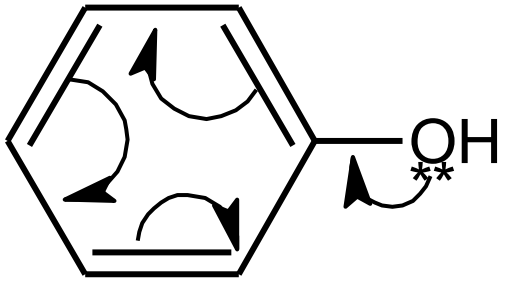


Hư +I tăng theo chiều dài mạch C và sự phân nhánh

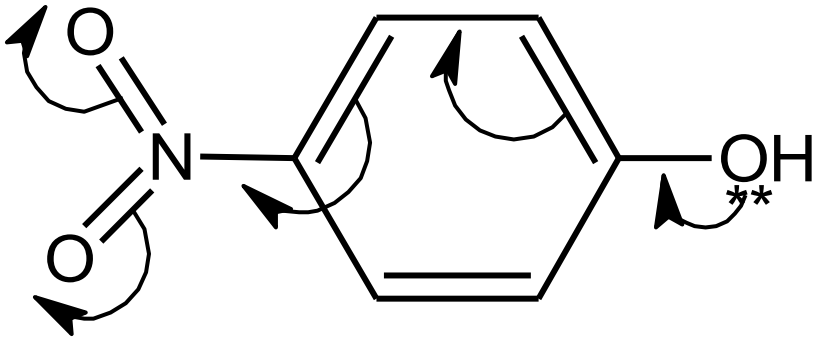
a. (I) > (II) > (III)

40. So sánh tính axit:

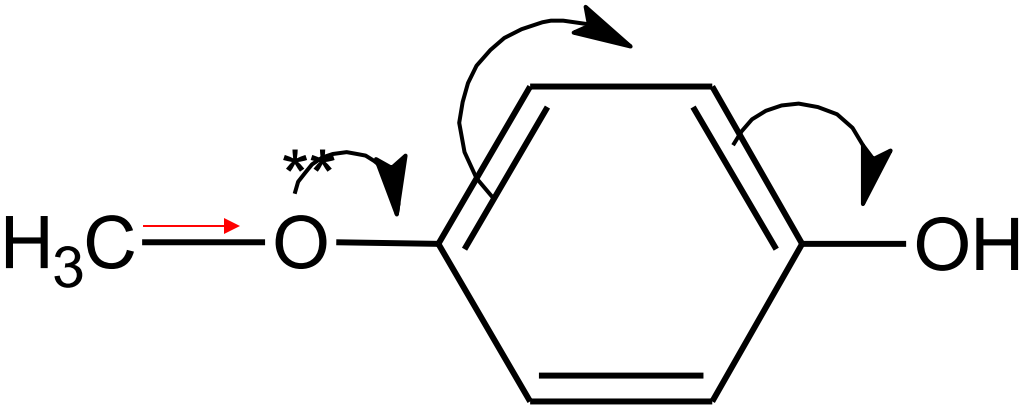
(I): C_6H_5-OH



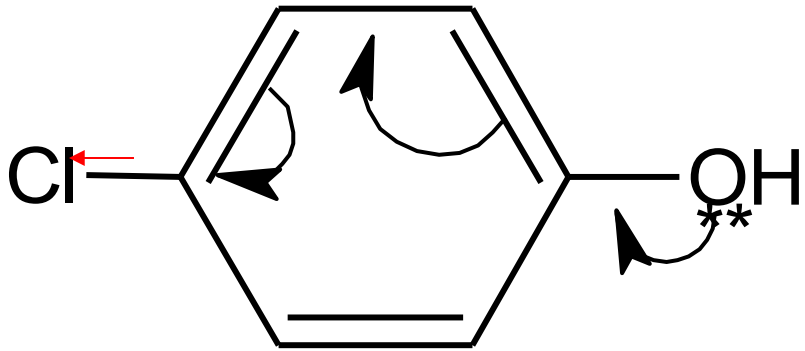
(II): p-O_2N-C_6H_4-OH



(III): p-CH_3O-C_6H_4-OH



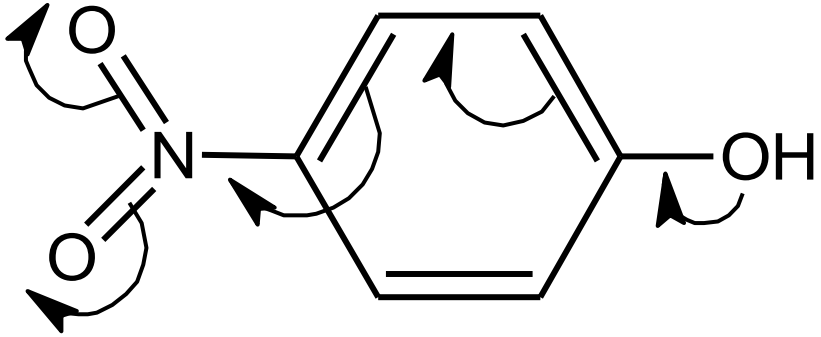
(IV): p-Cl-C_6H_4-OH



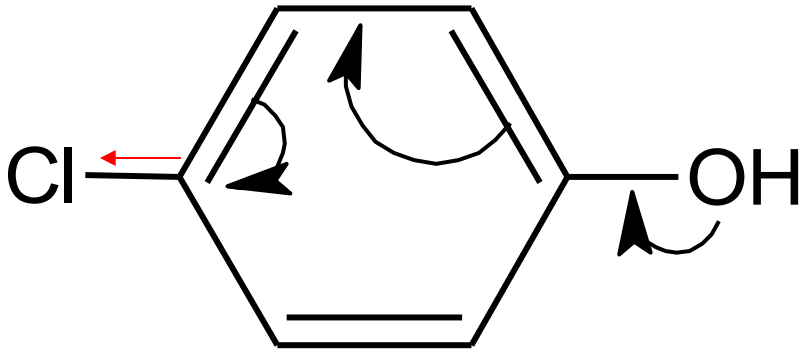
b. (II)>(IV)>(I)>(III)

41. So sánh tính axit:

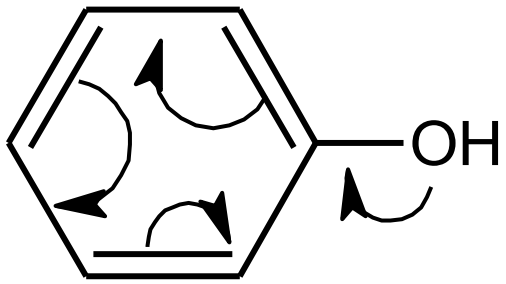
(I): p-nitrophenol



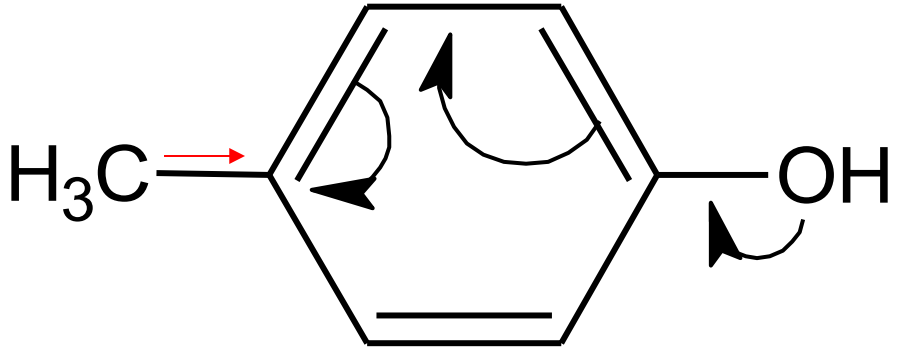
(II): p-clophenol



(III): phenol



(IV): p-cresol:



d. (IV)<(III)<(II)<(I)

42. So sánh tính axit:

A: $\overrightarrow{CH_3}COOH$ Hư +I

B: HCOOH

C: $\overleftarrow{Cl}CH_2COOH$ Hư -I

b. C > B > A

43. So sánh tính axit:

(I): HCOOH

(II): CH_3COOH

(III): $(CH_3)_2CHCOOH$

(IV): $CH_3CH_2CH_2COOH$

Hư +I tăng theo chiều dài mạch C và sự phân nhánh

b. (I)>(II)>(IV)>(III)

44. So sánh tính axit:

(I): FCH_2COOH

(II): $ClCH_2COOH$

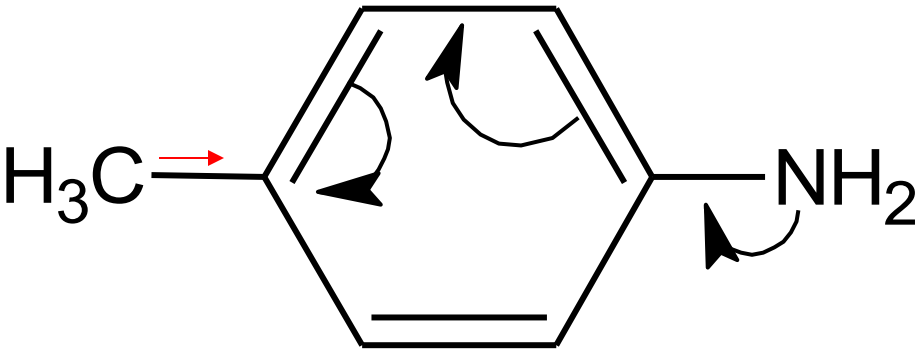
(III): $BrCH_2COOH$

(IV): $CH_2=CHCOOH$

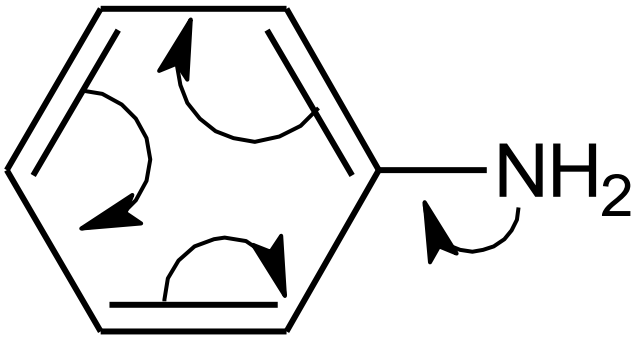
a. (I)>(II)>(III)>IV)

45. So sánh tính baz:

(A): p-toludin



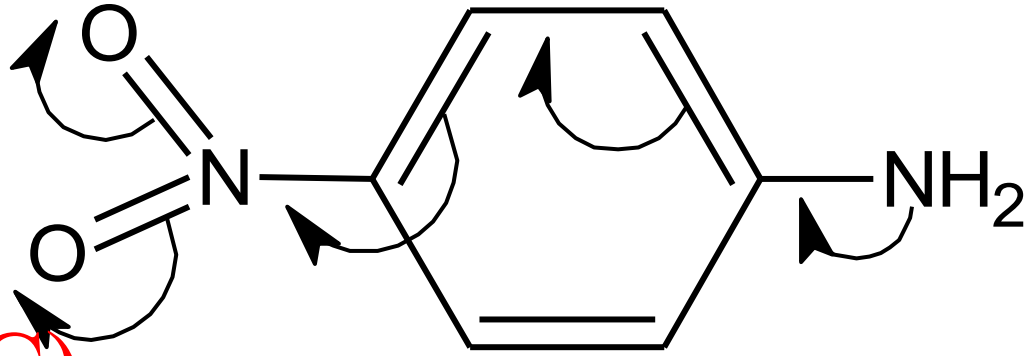
(B): Anilin



(C): Etilamin

C_2H_5-NH-C_2H_5

(D): p-nitroanilin



b. (D)<(B)<(A)<(C)

46. So sánh tính baz:

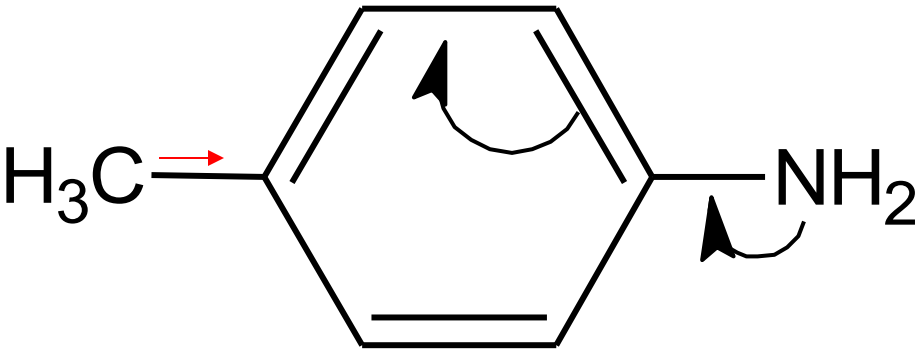
(A): n-propilamin

C_3H_7-NH-C_3H_7

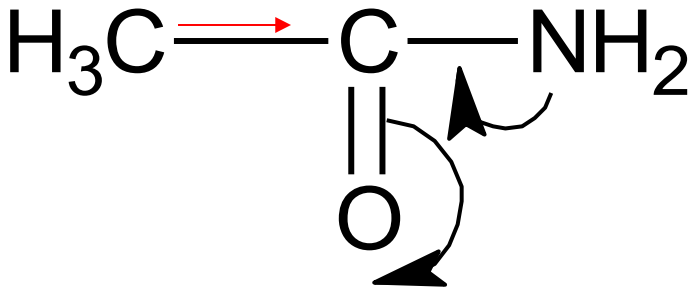
(B):triphenilamin

$(C_6H_5)_3N$

(C): p-toludin

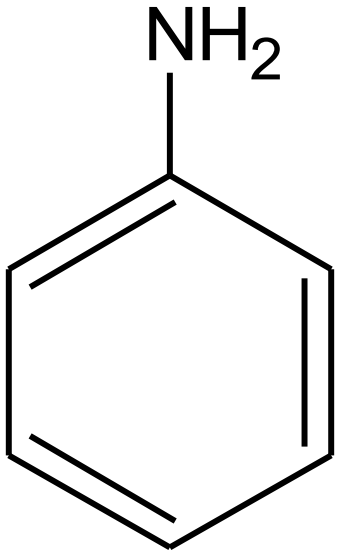


(D): Acetamid

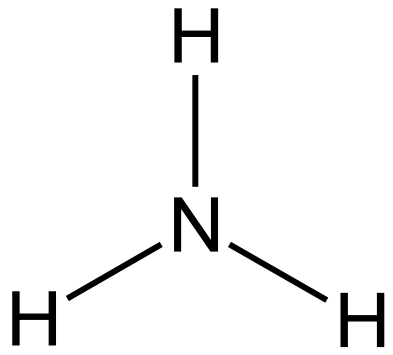


d. (B)<(D)<(C)<(A)

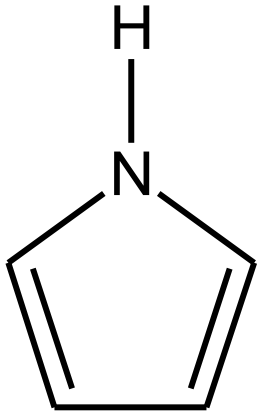
47. Tính baz giảm dần:



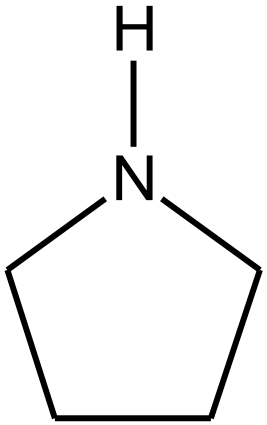
(1)



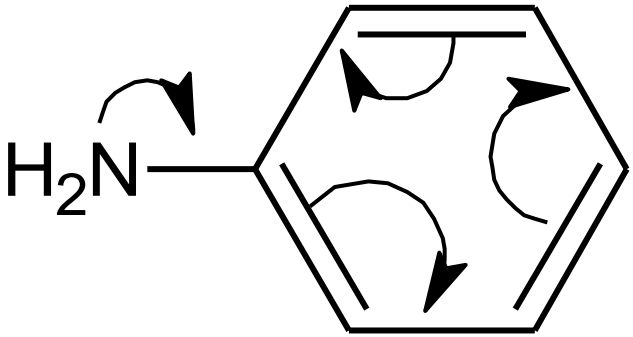
(2)

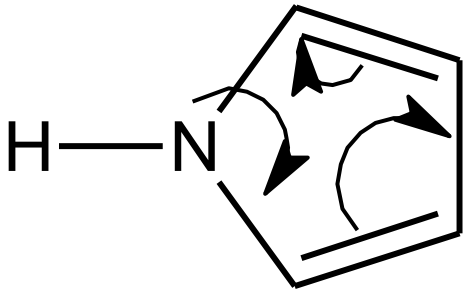


(3)



(4)





b. 4>2>3>1

48. Sản phẩm chính của pư (1) và (2) là:

CH_3-CH_2-CH=CH-CH_3 + HCl $\rightarrow$ (1)

CH_3-CH_2-CH=CH_2 + HCl $\rightarrow$ (2)

Hư siêu liên hợp chiếm ưu thế

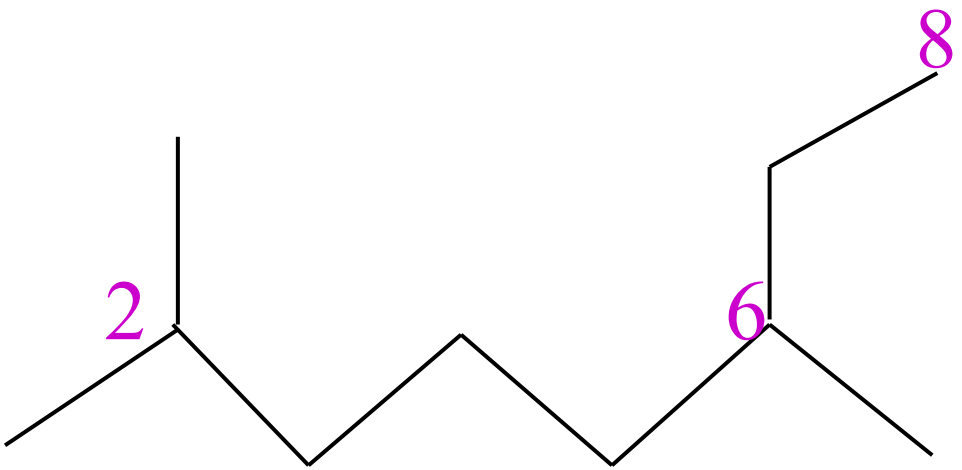
b. $CH_3CH_2CH_2CHClCH_3$ và

$CH_3CH_2CHClCH_3$

CHƯƠNG II: HYDROCARBON

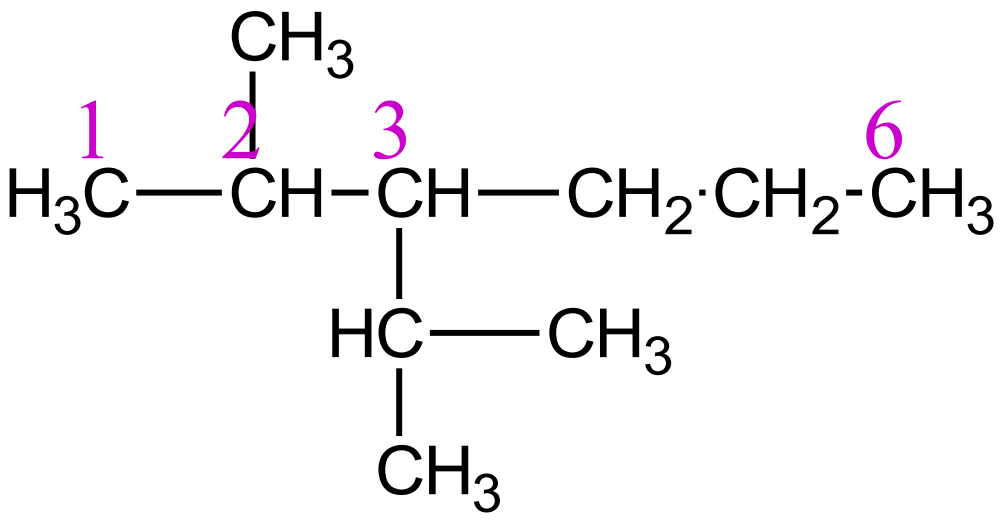
A: Ankan

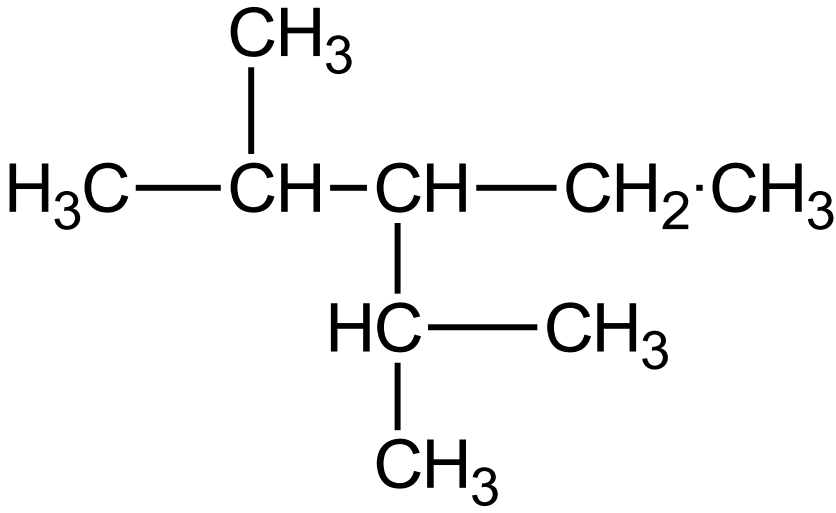
1. Tên của hợp chất dưới đây là:

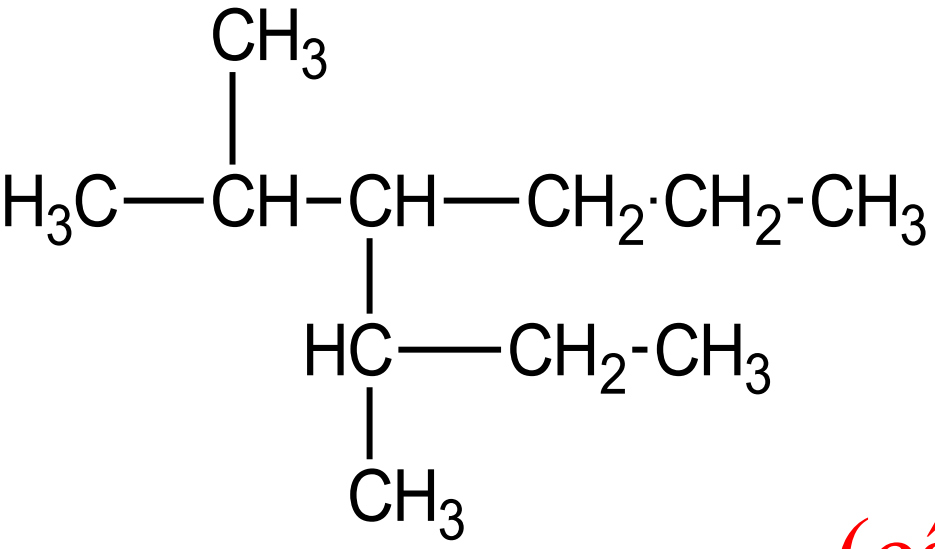


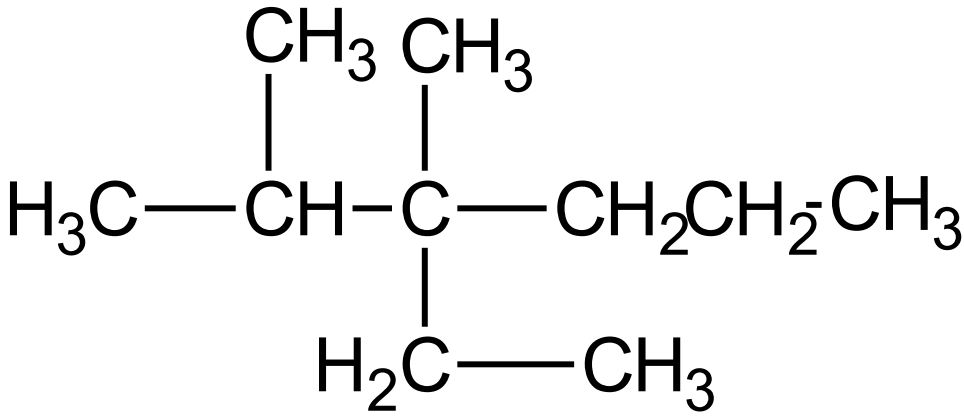
c. 2,6-dimetyloctan

2. 2-Metyl-3-(1-metyletyl)hexan?





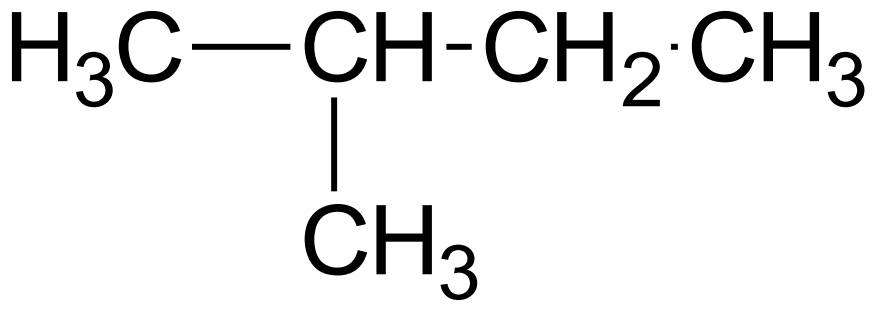


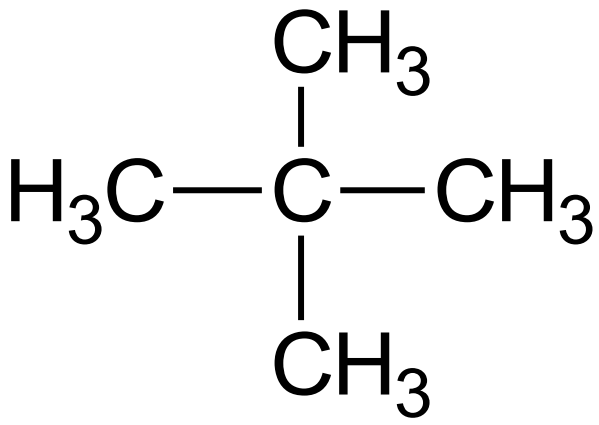


(câu a)

3. Số đồng phân cấu tạo của C_5H_{12} là

CH_3-CH_2-CH_2-CH_2-CH_3

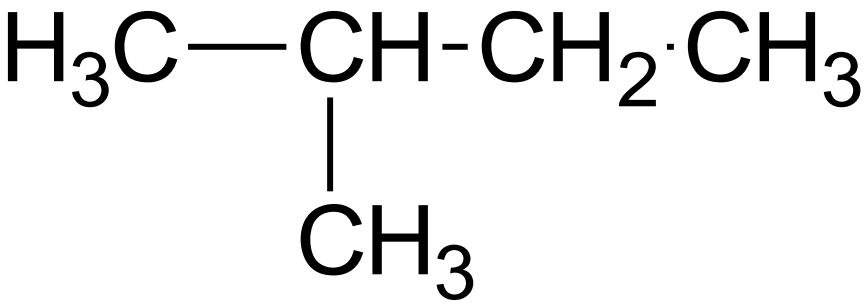


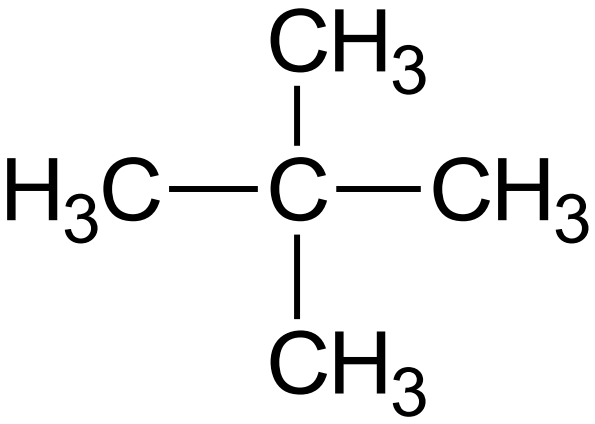


c. 3

4. Trong các đồng phân: (I) n-pentan; (II) izopentan; (III) neopentan: t^o_s thấp nhất?

$CH_3\text{-}CH_2\text{-}CH_2\text{-}CH_2\text{-}CH_3$



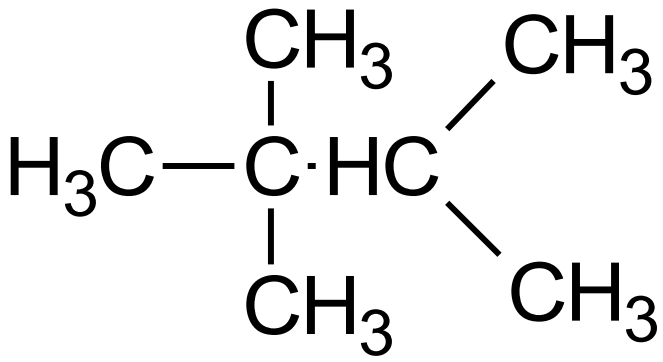


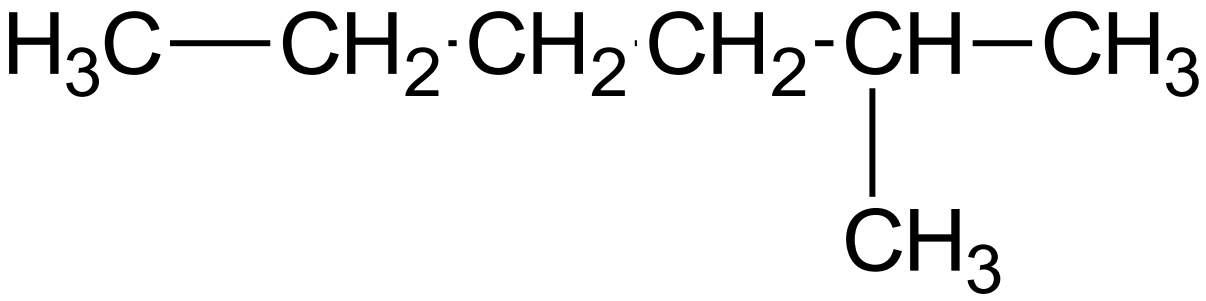
Phân nhánh nhiều nhất: t^o_s thấp nhất

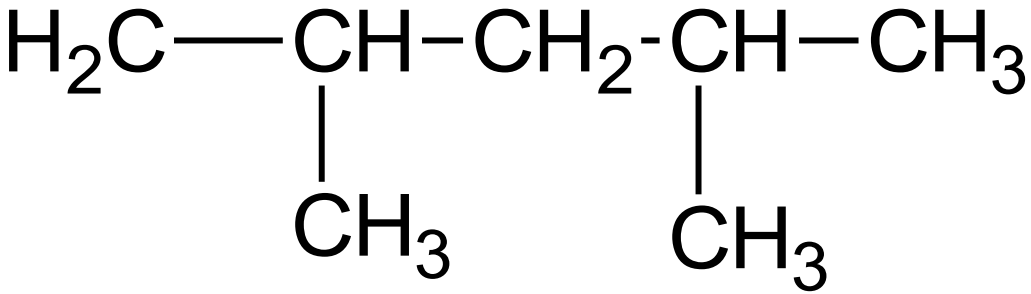
c. (III)

5. Chất có t^o_s cao nhất?

$CH_3CH_2CH_2CH_2CH_2CH_2CH_3$

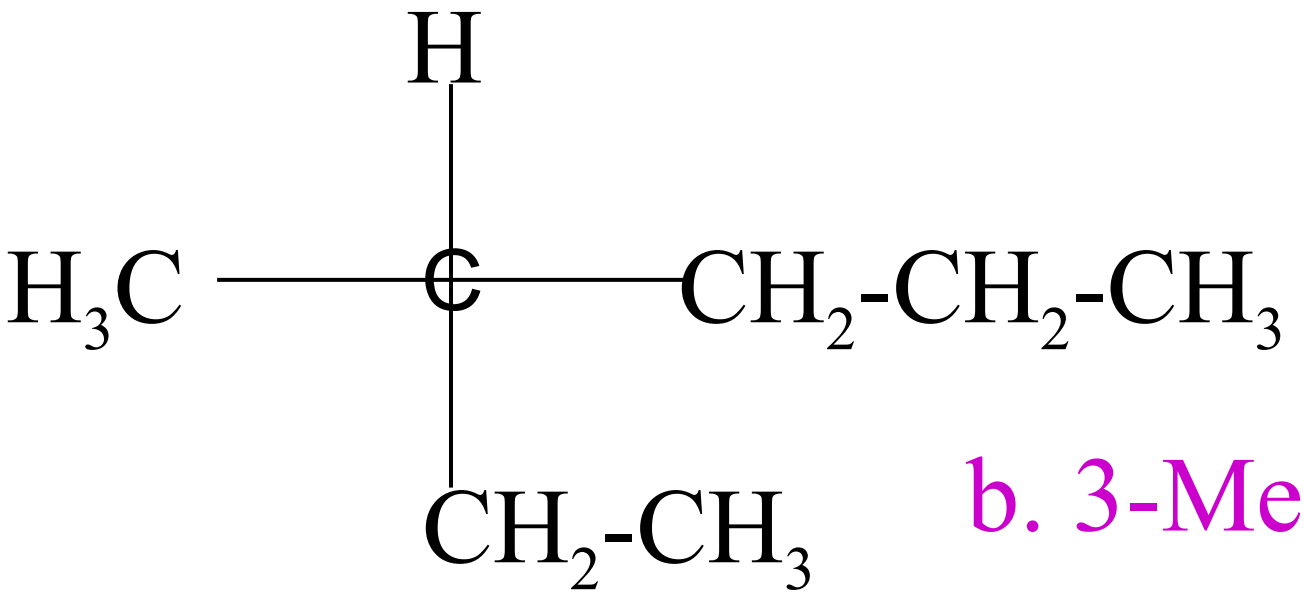




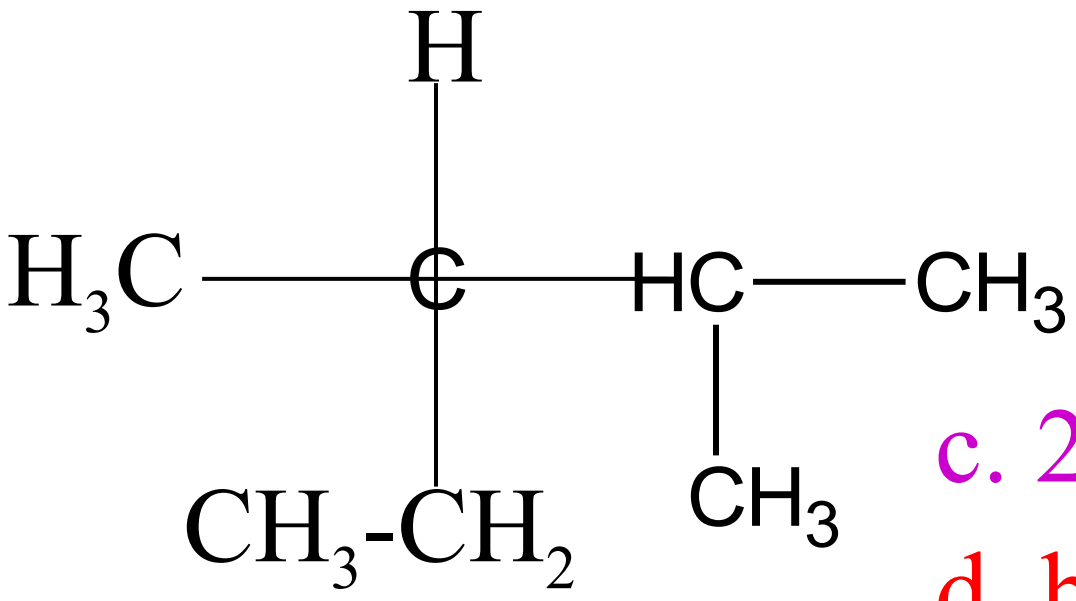


Câu a

7. Tên gọi ankan ít C nhất có 1C*



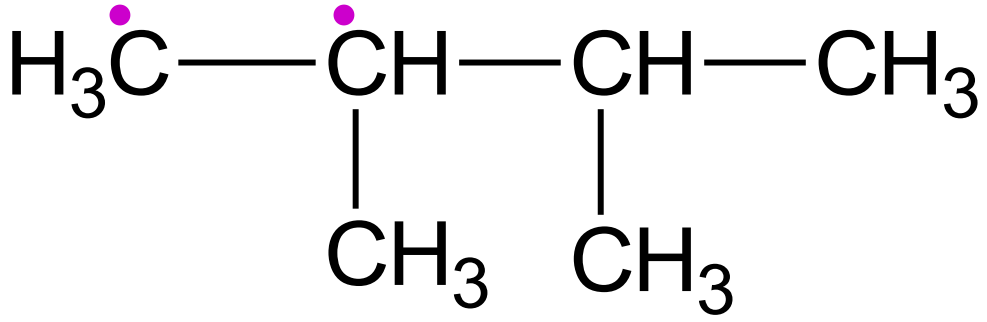
b. 3-Metylhexan



c. 2,3-Dimetylpentan

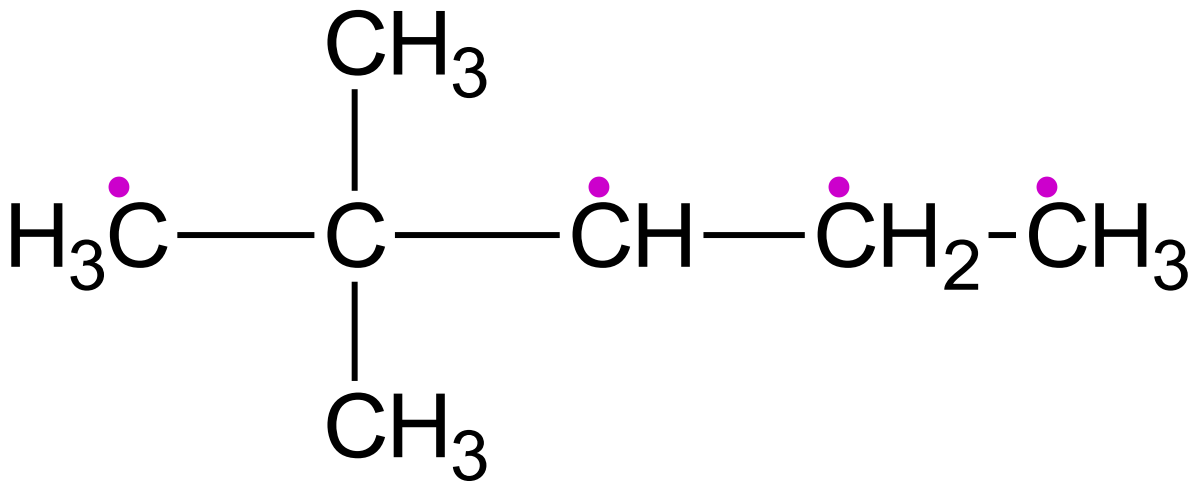
d. b và c đúng

8. Số sp monoclo hóa của 2,3-Dimetylbutan:



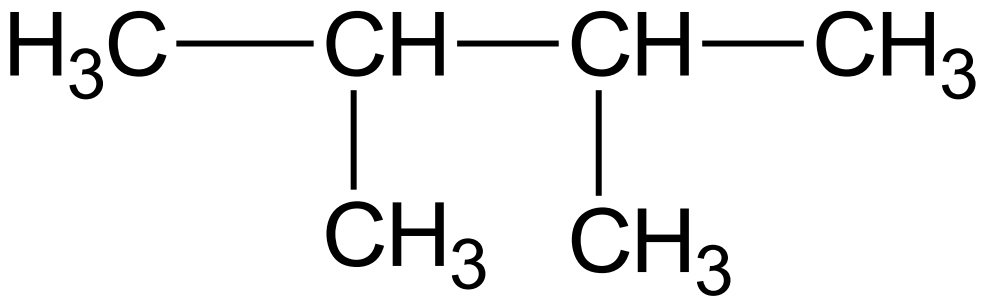
a. 2

9. Số sp monoclo hóa: 2,2-Dimetylpentan



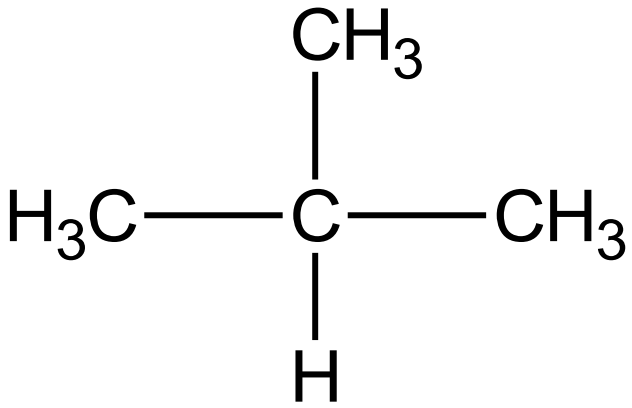
b. 4

10. Số sp diclo hóa: 2,3-dimetylbutan



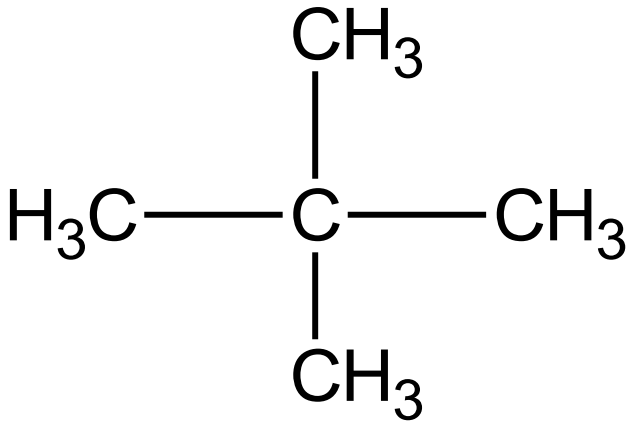
a. 6

11. Số sp diclo hóa:



c. 3

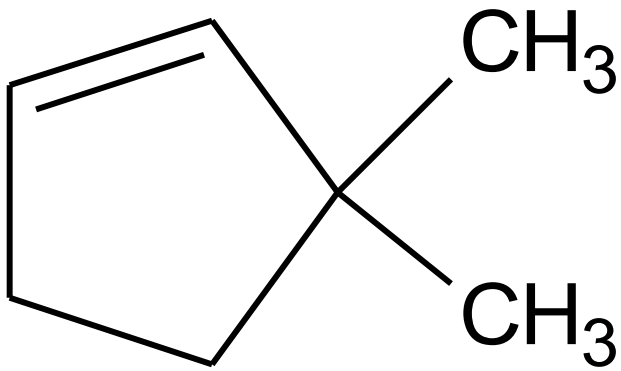
12. C_2H_5 chỉ cho 1 sp monoclo khi clo hóa



c. neopentan

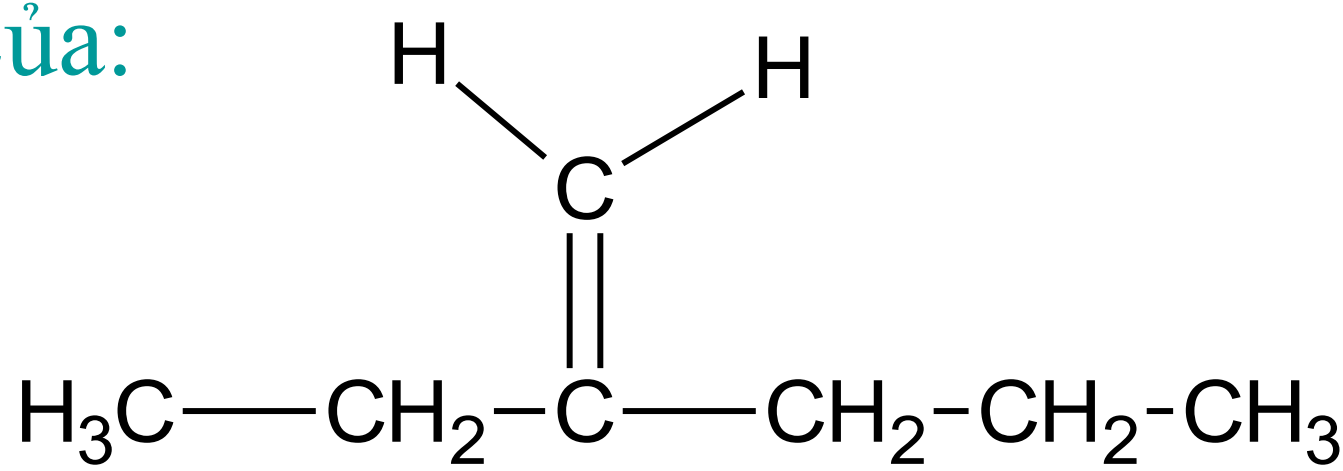
B. Anken

13. Tên gọi của:



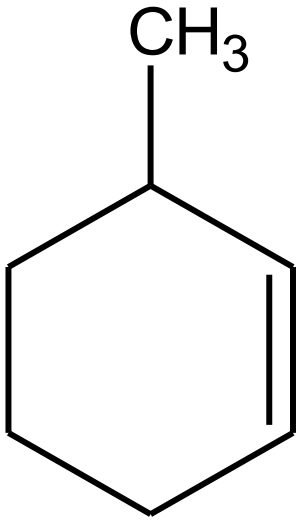
d. 3,3-Dimetylxiclopenten

14. Tên gọi của:



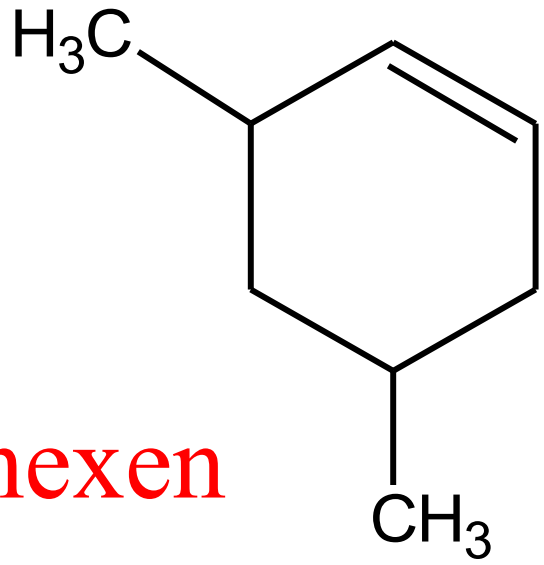
d. 2-Etylpenten-1

15. Tên gọi của:



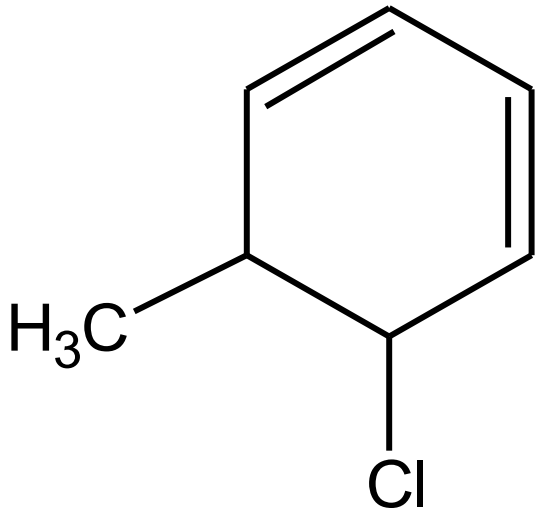
d. 3-Metylxiclohexen

16. Tên gọi của:



d. 3,5-Dimetylxiclohexen

17. Tên gọi của:

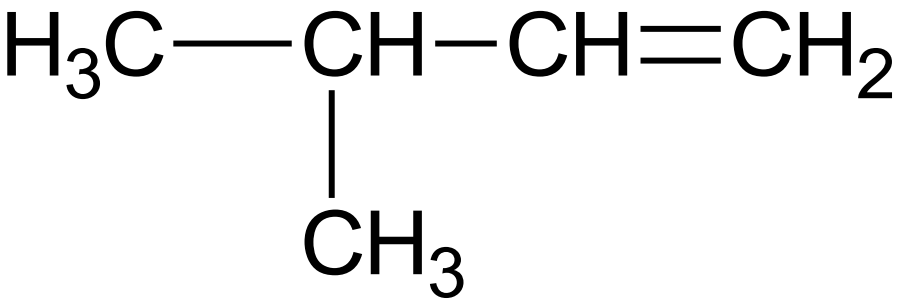


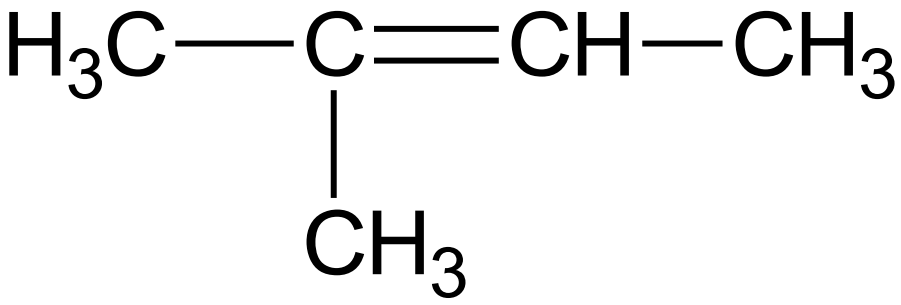
a. 5-clo-6-metylxiclohexadien-1,3

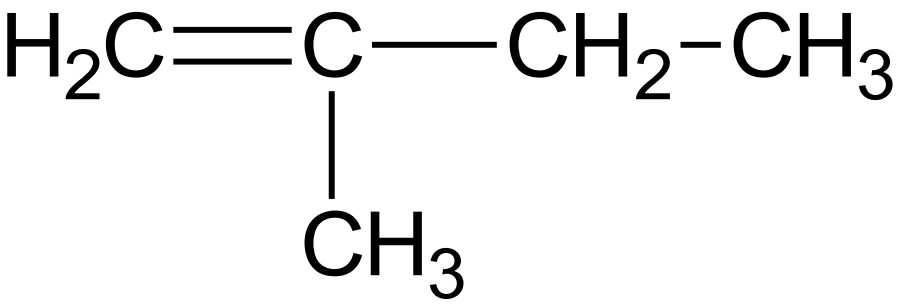
18. Anken C_5H_{10} có bao nhiêu đồng phân?

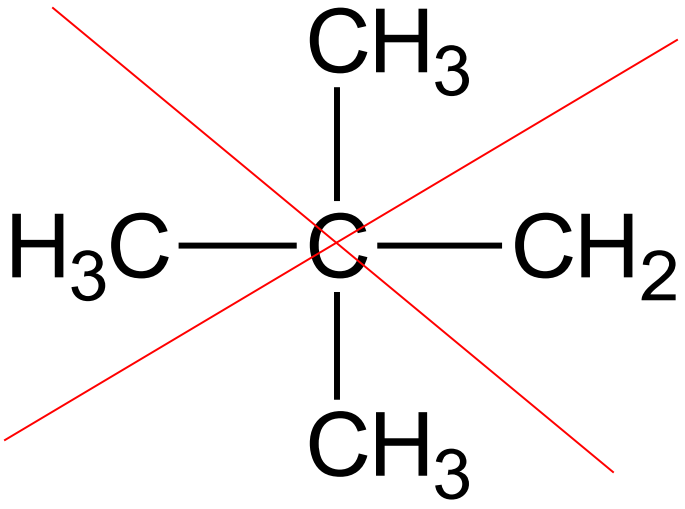
$CH_2=CH-CH_2CH_2CH_3$

$CH_3-CH=CH-CH_2CH_3$ (2 đp hình học)





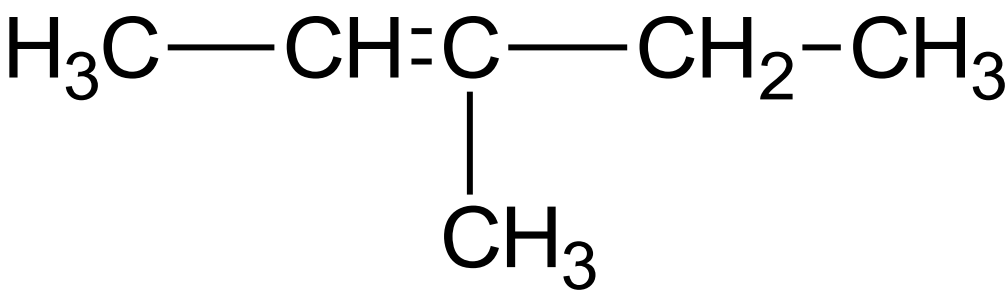


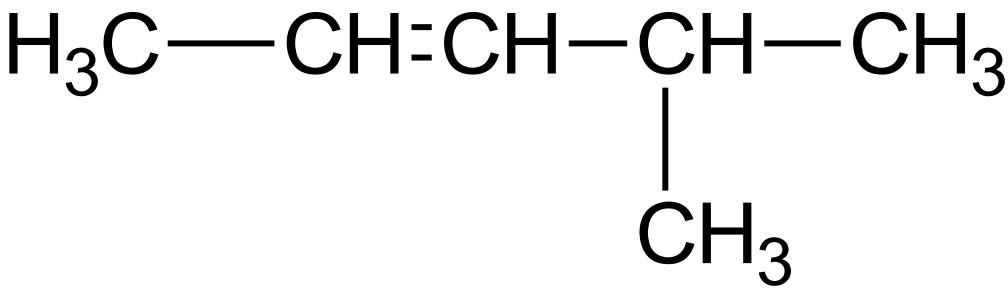


c. 6

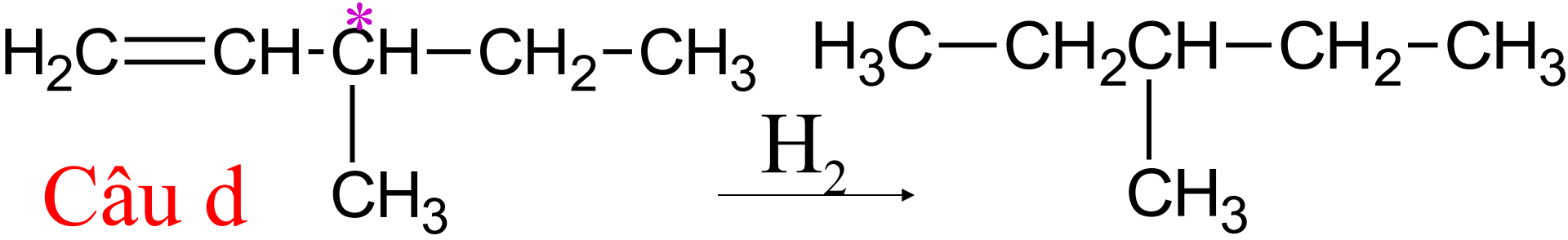
19. C_6H_{12} có tính quang hoạt, Hidro hóa A được B không có tính quang hoạt. A là:

a. Hexen-2 $CH_3CH{=}CHCH_2CH_2CH_3$

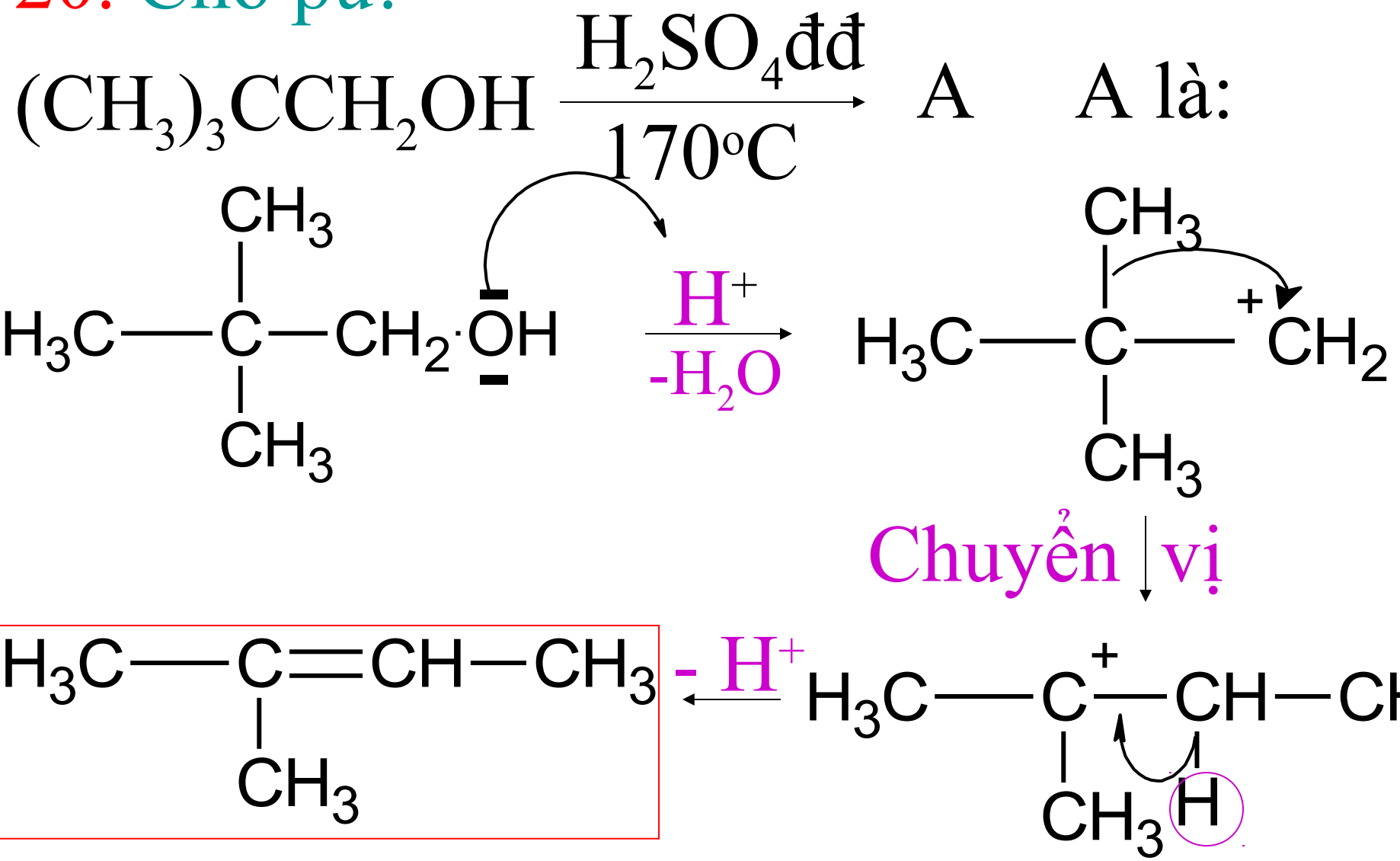
b. 3-Metylpenten-2 

c. 4-Metylpenten-2 

d. 3-Metylpenten-1

Câu d 

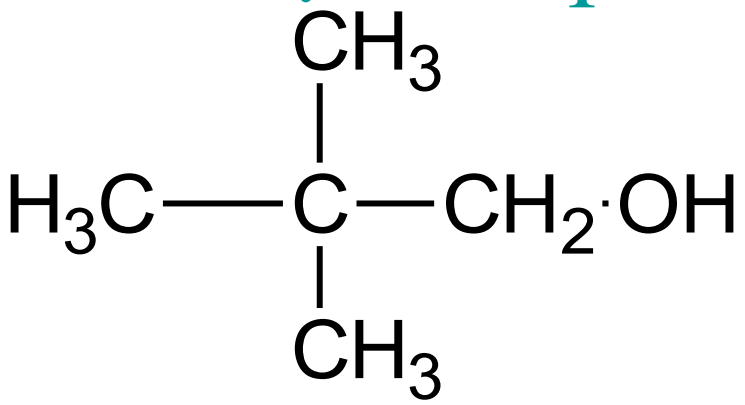
20. Cho pư:



Câu (a)

21. Cho pư:

Rượu neopentyl $\xrightarrow[t^o]{H_2SO_4đđ}$ A



Giống câu 20: (a)

22. Khả năng pư với Br_2 giảm dần:

(I) $CH_2=CH-CH_3$ (II) $CH_2=C(CH_3)_2$

(III) $CH_2=CH-COOH$

(IV) $CH_3-CH=CH-COOH$

d. (II)>(I)>(IV)>(III)

23. Cho chuỗi pư:

Propen + HBr $\xrightarrow{\text{peroxit}}$ A $\xrightarrow{\text{Na/eter}}$ B

A và B lần lượt là:

$CH_3\text{-}CH{=}CH_2 \xrightarrow[\text{peroxit}]{HBr} CH_3\text{-}CH_2\text{-}CH_2\text{-}Br$

n-propil bromur

$\xrightarrow{\text{Na/eter}}$

$CH_3CH_2CH_2CH_2CH_2CH_3$

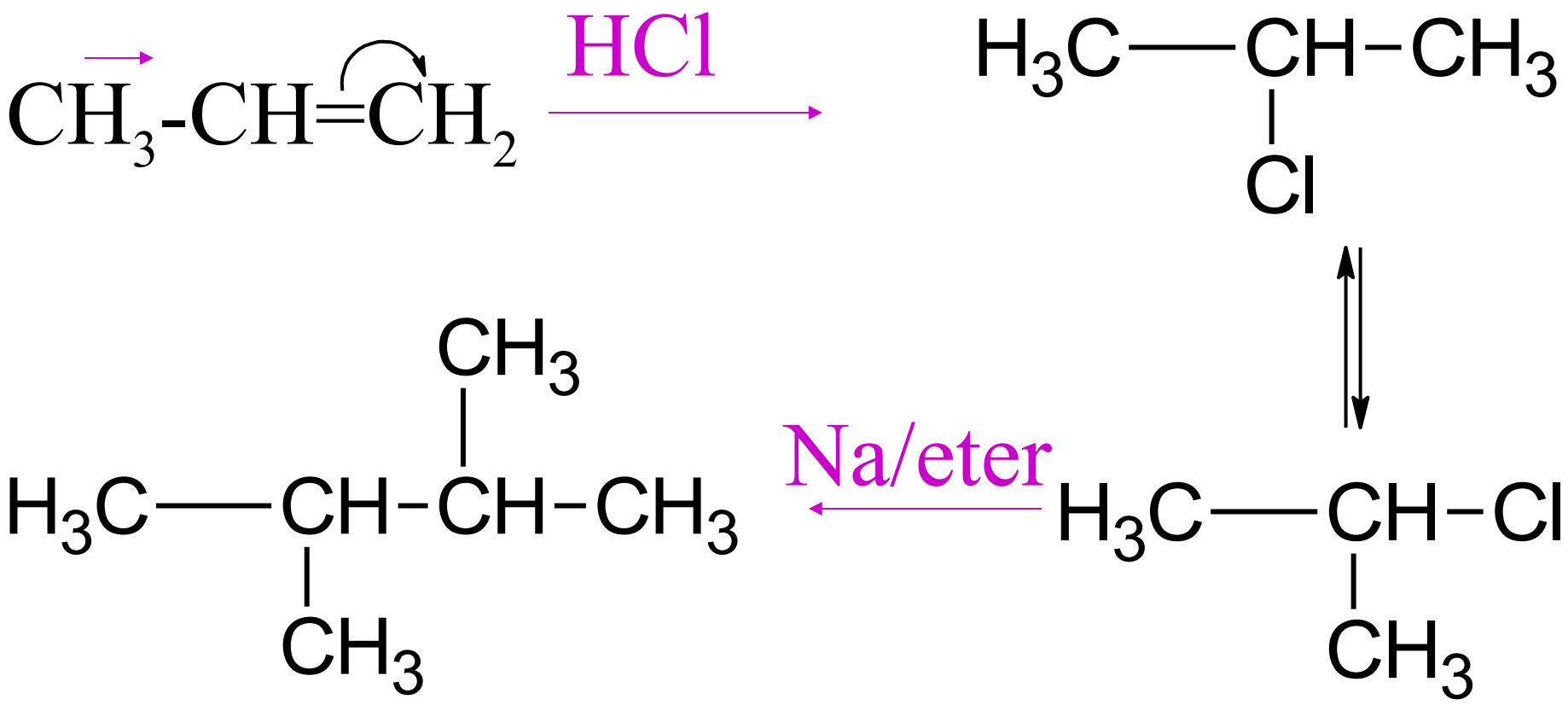
n- hexan

(a)

24. Cho chuỗi pư:

Propen + HCl $\xrightarrow{\text{peroxit}}$ A $\xrightarrow{\text{Na/eter}}$ B

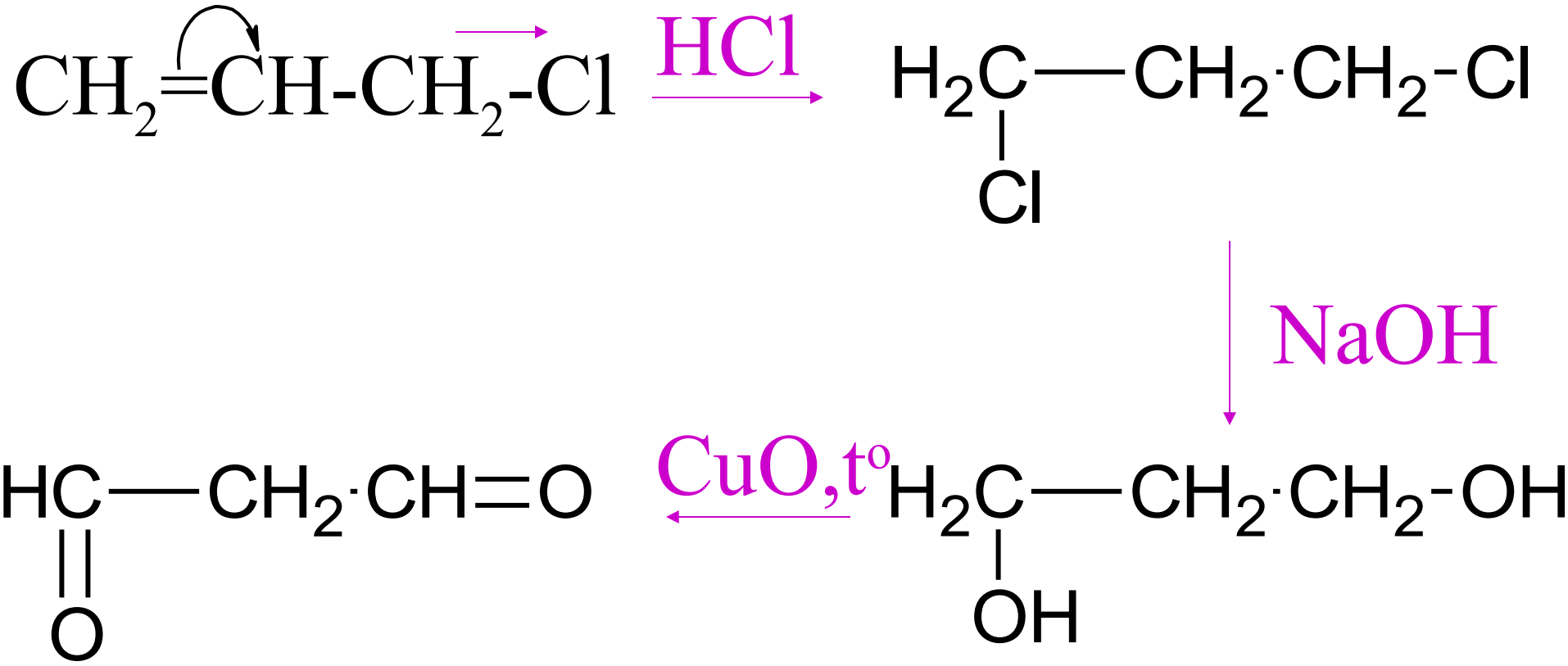
A và B lần lượt là:



b. Izopropyl clorur và 2,3-Dimetylbutan

25. Cho pư:

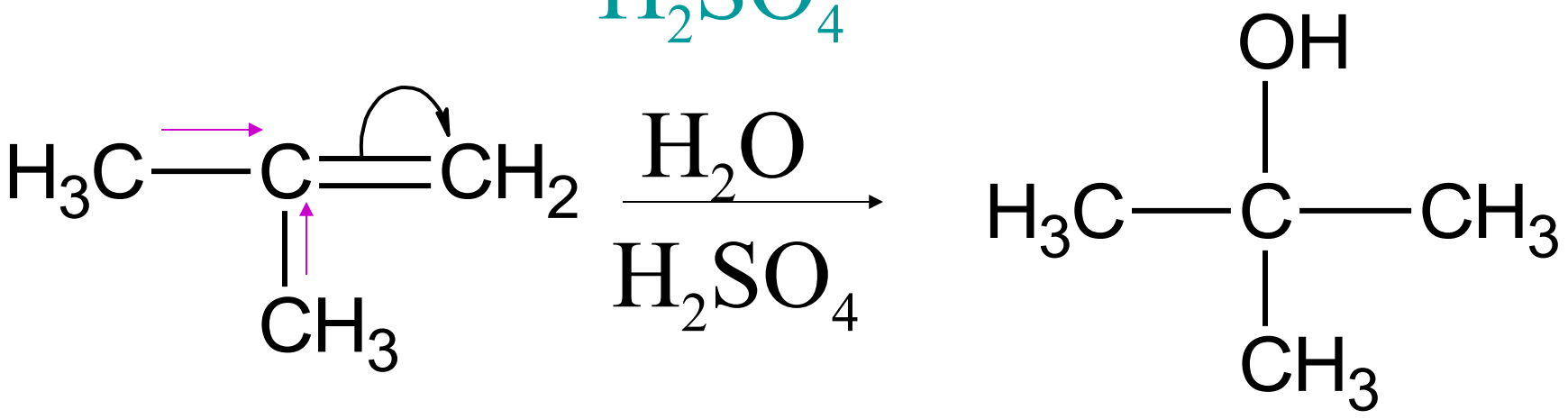
$CH_2=CH-CH_2-Cl \xrightarrow{HCl} A \xrightarrow{NaOH} B \xrightarrow{CuO,t^o} C$



(a)

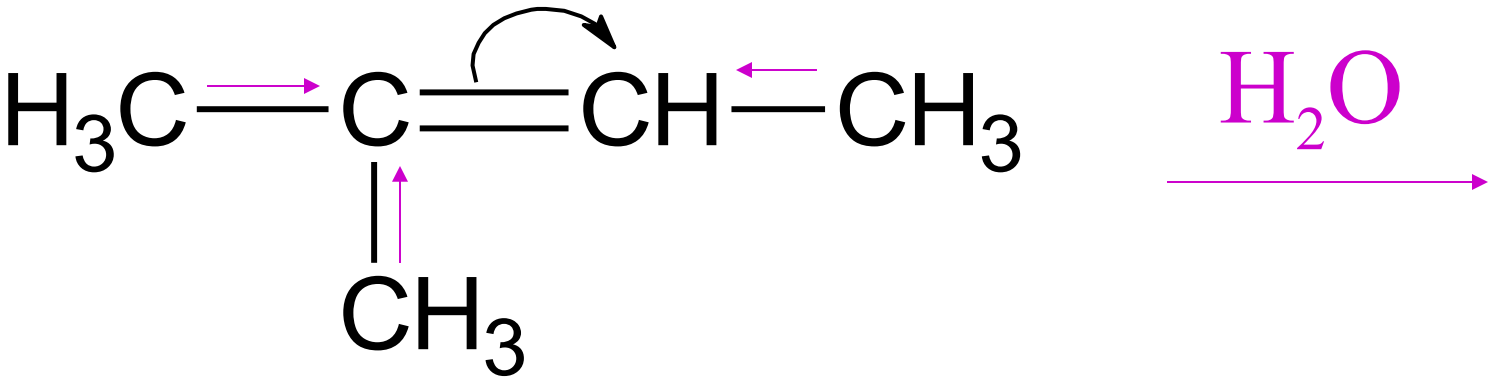
27. Cho pư:

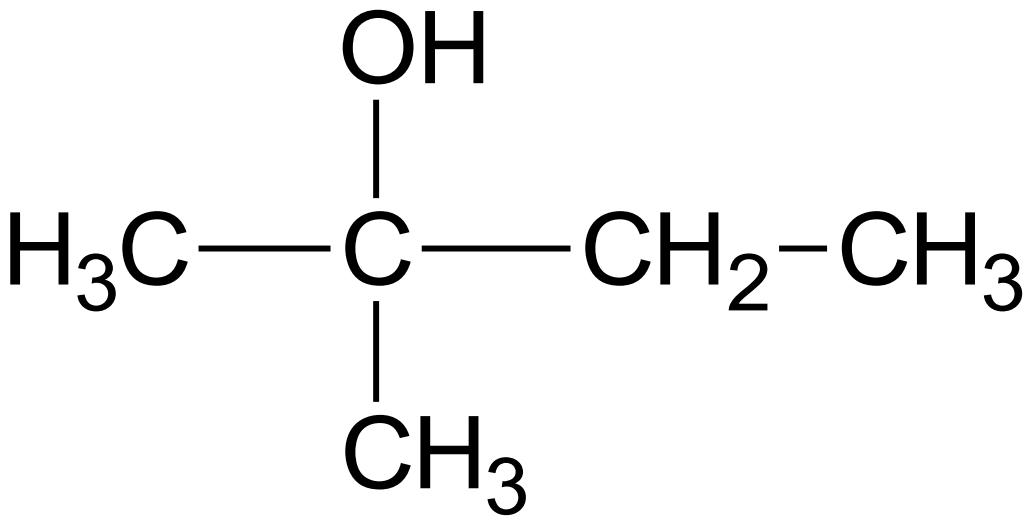
2-Metylpropen $\xrightarrow[H_2SO_4]{H_2O}$ A (sp chính)



d. 2-Metylpropanol-2

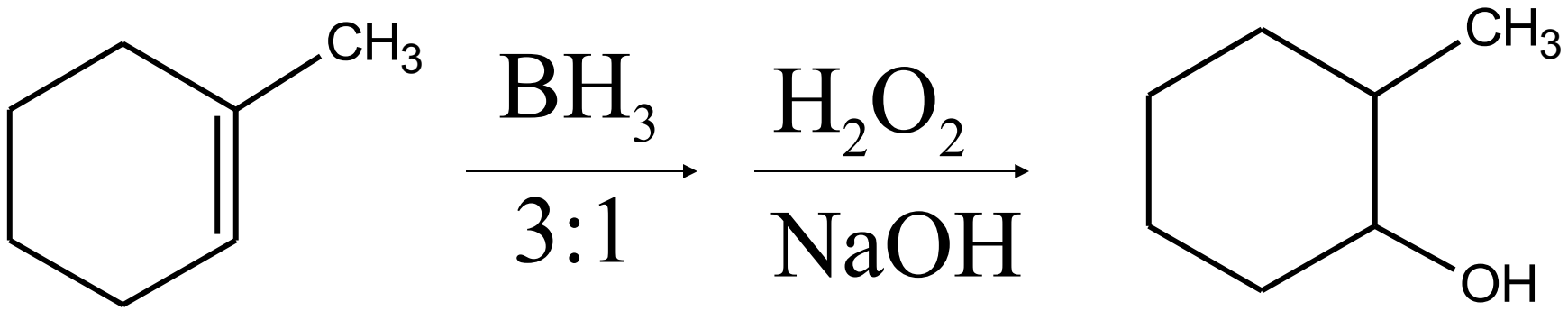
28. Sp chính khi hydrat hóa 2-Metylbuten-2





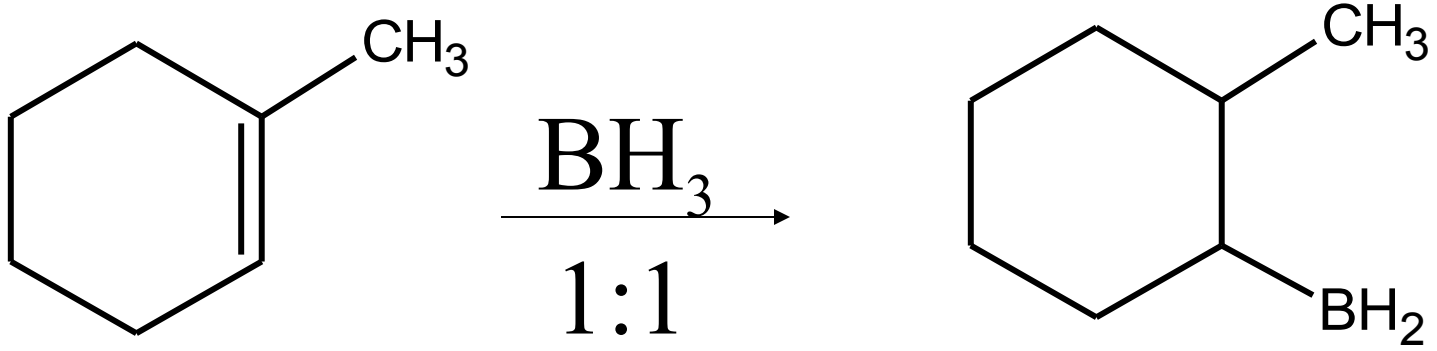
(a)

29. Sản phẩm của pư:



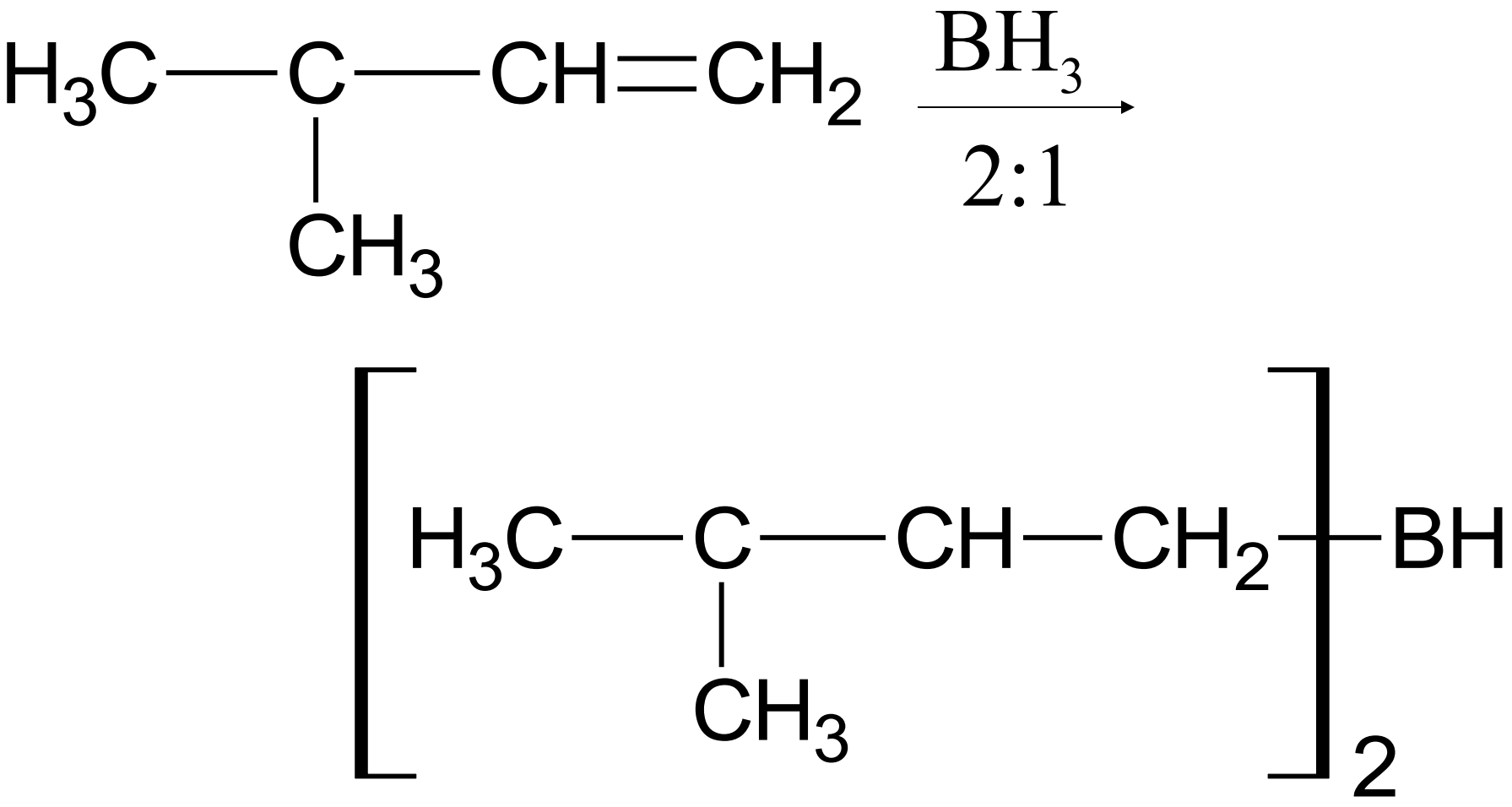
(b)

30. Sp của pư



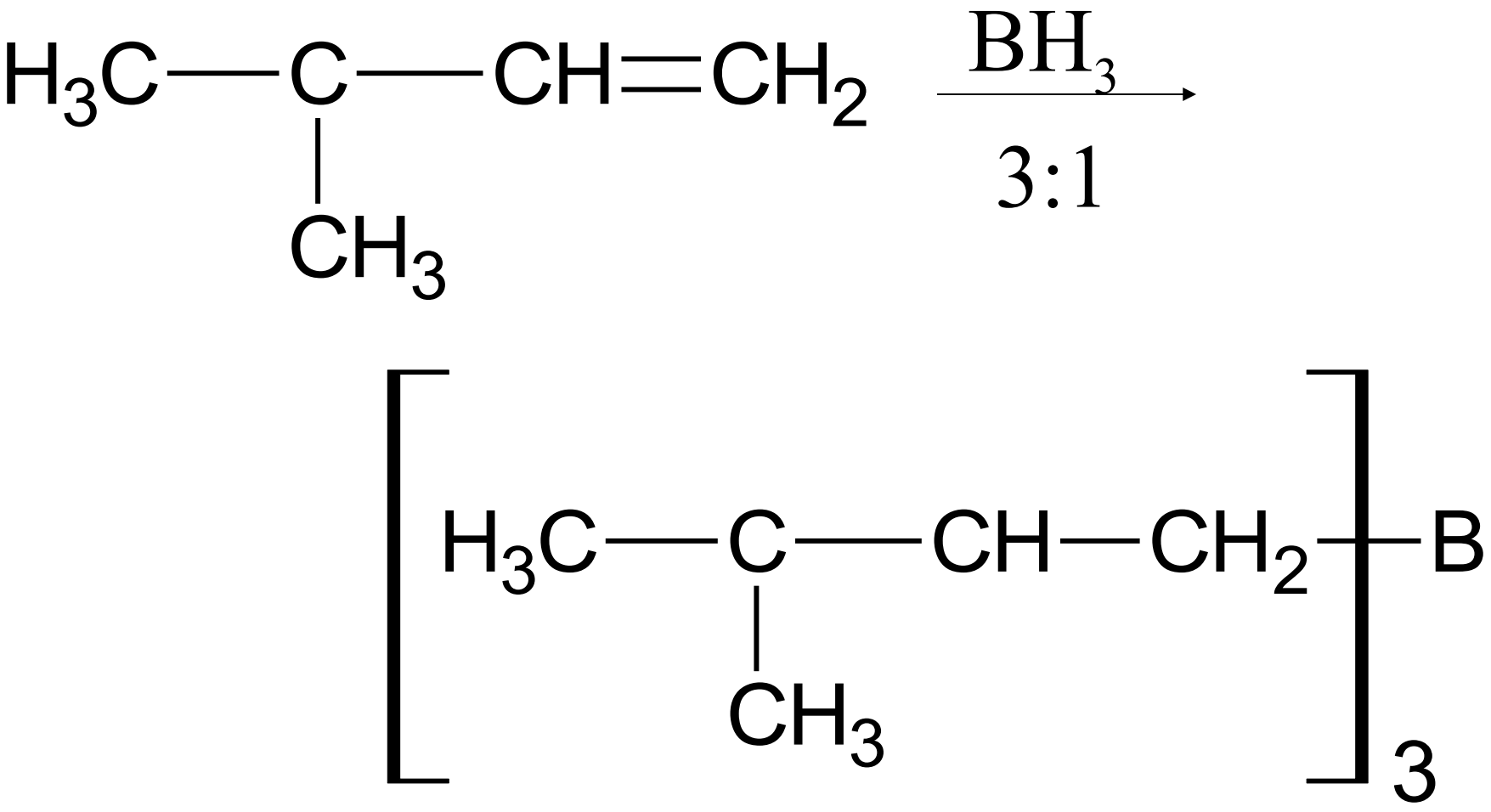
(d)

31. Sản phẩm của pư:



(c)

32. Sản phẩm của pư:



(c)

33. Propen → propanol-1 ?

$CH_3\text{-}CH{=}CH_2 \longrightarrow CH_3\text{-}CH_2\text{-}CH_2OH$

a. $\xrightarrow[2)\ H_2O/NaOH]{1)\ HCl,\ peroxit}$ OH vào C_2

b. $\xrightarrow[2)H_2O_2/OH^-]{1)\ BH_3}$ $CH_3\text{-}CH_2\text{-}CH_2OH$

c. $\xrightarrow[H_2SO_4l]{H_2O}$ OH vào C_2

Câu (b)

d. Cả a và b

34. Propen → Propanol-2 ?

CH_3-CH=CH_2 → CH_3-$CHOH$-CH_3

a. 1) HBr, peroxit; 2) H_2O/NaOH → CH_3-CH_2-CH_2OH

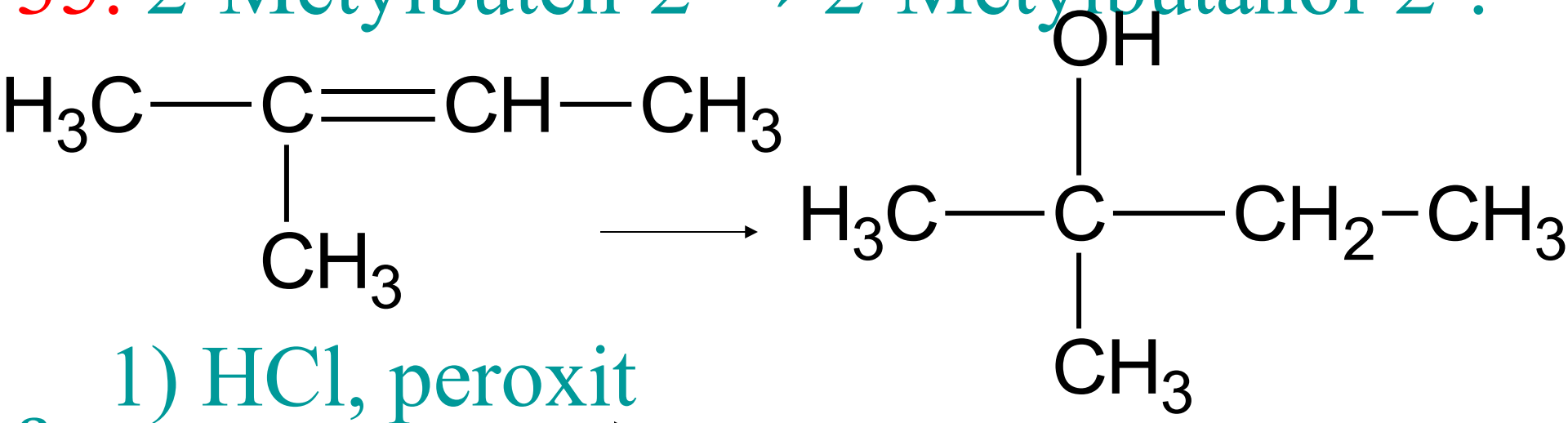
b. 1) BH_3; 2) H_2O_2/OH^- → CH_3-CH_2-CH_2OH

c. 1) H_2SO_4đđ; 2) H_3O^+ → CH_3-$CHOH$-CH_3

d. Tất cả đều sai

Câu (c)

35. 2-Metylbuten-2 → 2-Metylbutanol-2 ?



a. $\xrightarrow[2)\ H_2O/NaOH]{1)\ HCl,\ peroxit}$ OH vào C_2

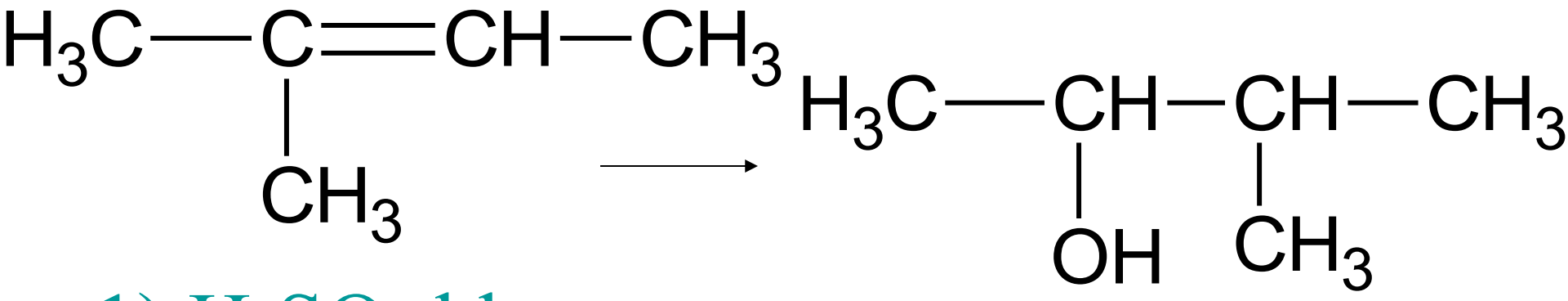
b. $\xrightarrow[H_2SO_4l]{H_2O}$ OH vào C_2

c. $\xrightarrow[2)\ H_2O_2/OH^-]{1)\ BH_3}$ OH vào C_1

d. Cả a và b

Câu (d)

36. 2-Metylbuten-2 → 3-Metylbutanol-2 ?



a. $\xrightarrow[2)\ H_3O^+]{1)\ H_2SO_4đđ}$ OH vào C nhiều nhóm thế

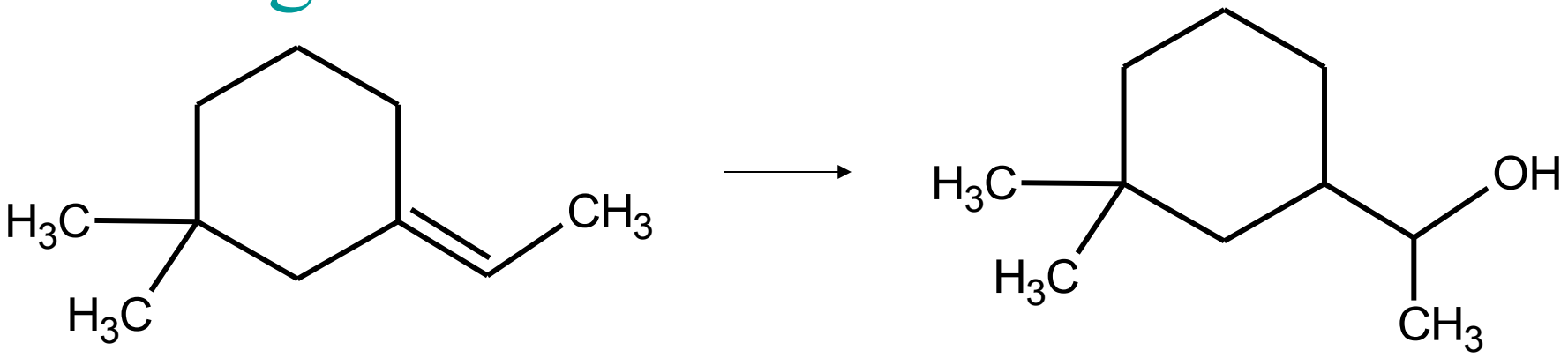
b. $\xrightarrow[H_2SO_4l]{H_2O}$ OH vào C nhiều nhóm thế

c. $\xrightarrow[2)\ H_2O/NaOH]{1)\ HBr,\ peroxit}$ OH vào C ít nhóm thế

d. Cả a và b

Câu c

37. Dùng tác chất nào?



a. $\xrightarrow[2)\ H_2O/NaOH]{1)\ HCl,\ peroxit}$ OH vào C nhiều nhóm thế

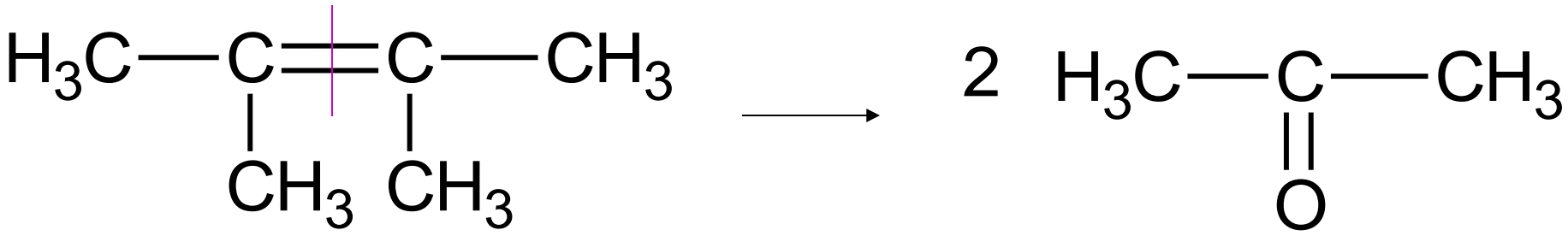
b. $\xrightarrow[2)\ H_2O_2/OH^-]{1)\ BH_3}$ OH vào C ít nhóm thế

c. $\xrightarrow[H_2SO_4l]{H_2O}$ OH vào C nhiều nhóm thế

d. Cả a và b

Câu (b)

38. Sp của pư ozon giải 2,3-Dimetylbuten-2



Câu (b)

39. Ozon giải A chỉ thu được aceton, A là:

a. 2,3-Dimetylbuten-2

40. Ozon giải B chỉ thu được axetandehit

CH_3-CH=O ⟶ B: CH_3-CH= =HC-CH_3

↓

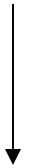
CH_3-CH=CH-CH_3

c. Buten-2

41. Ozon giải 1 mol(X)→2mol HCHO và 1mol $(CHO)_2$, tên của X

$$X \rightarrow 2\ H_2C{=}O + O{=}CH\text{-}CH{=}O$$

$$CH_2{=} \quad {=}CH\text{-}CH{=} \quad {=}CH_2$$

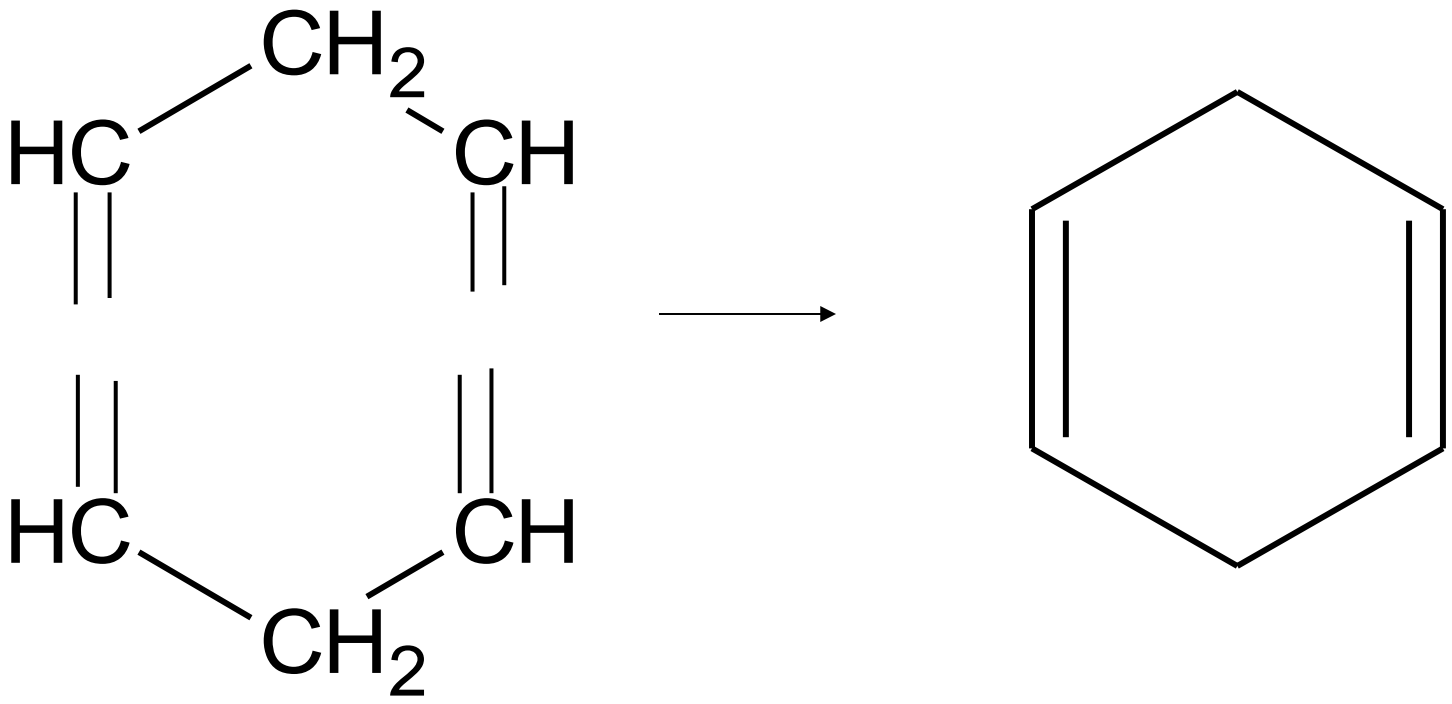


$$CH_2{=}CH\text{-}CH{=}CH_2$$

a. Butadien-1,3

42. Ozon giải 1mol Y → 2mol $CH_2(CHO)_2$

Y → 2 O=CH-CH_2-CH=O



c. Ciclohexadien-1,4

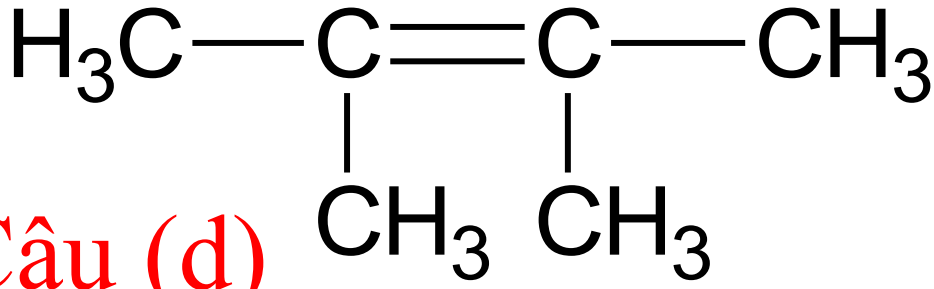
43. $Z(C_6H_{12})$ → Ozon giải / $KMnO_4$đđ → Sp giống nhau

a. Hexen-1 $CH_2=CH-CH_2-CH_2-CH_2-CH_3$

b. Hexen-2 $CH_3-CH=CH-CH_2-CH_2-CH_3$

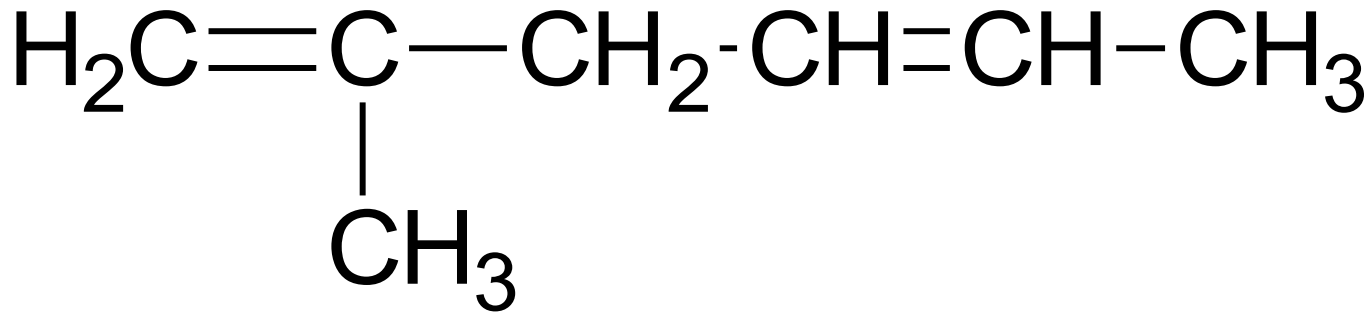
c. Hexen-3 $CH_3-CH_2-CH=CH-CH_2-CH_3$

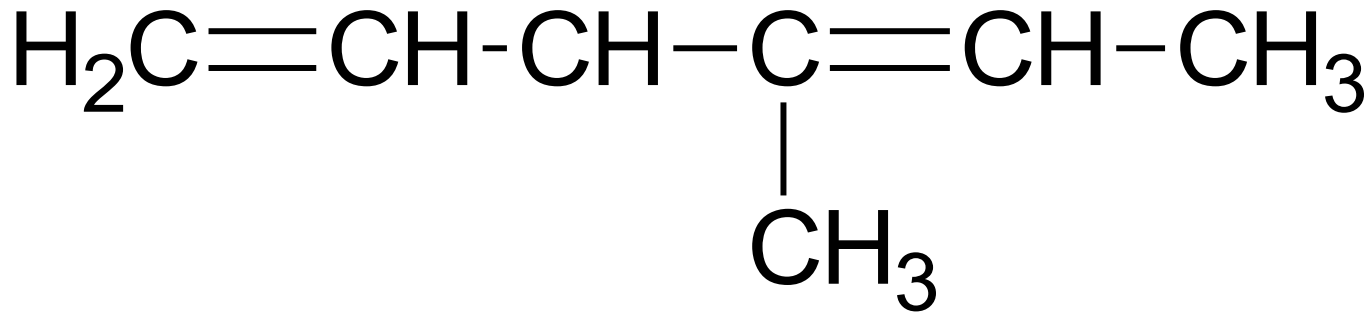
d. 2,3-Dimetylbuten-2

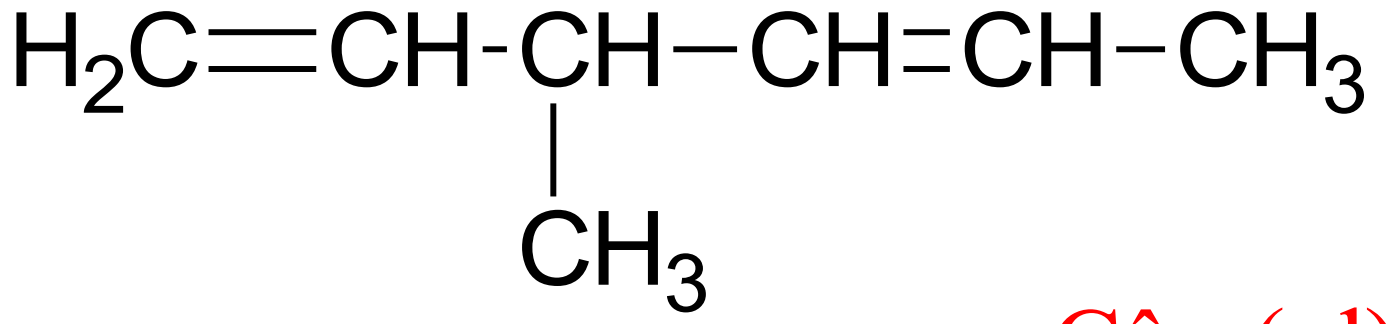


Câu (d)

44. Ozon giải 1 mol A → 1mol formaldehit + 1mol axetandehit+1 mol CH_3-CO-CH_2-CHO

a. 

b. 

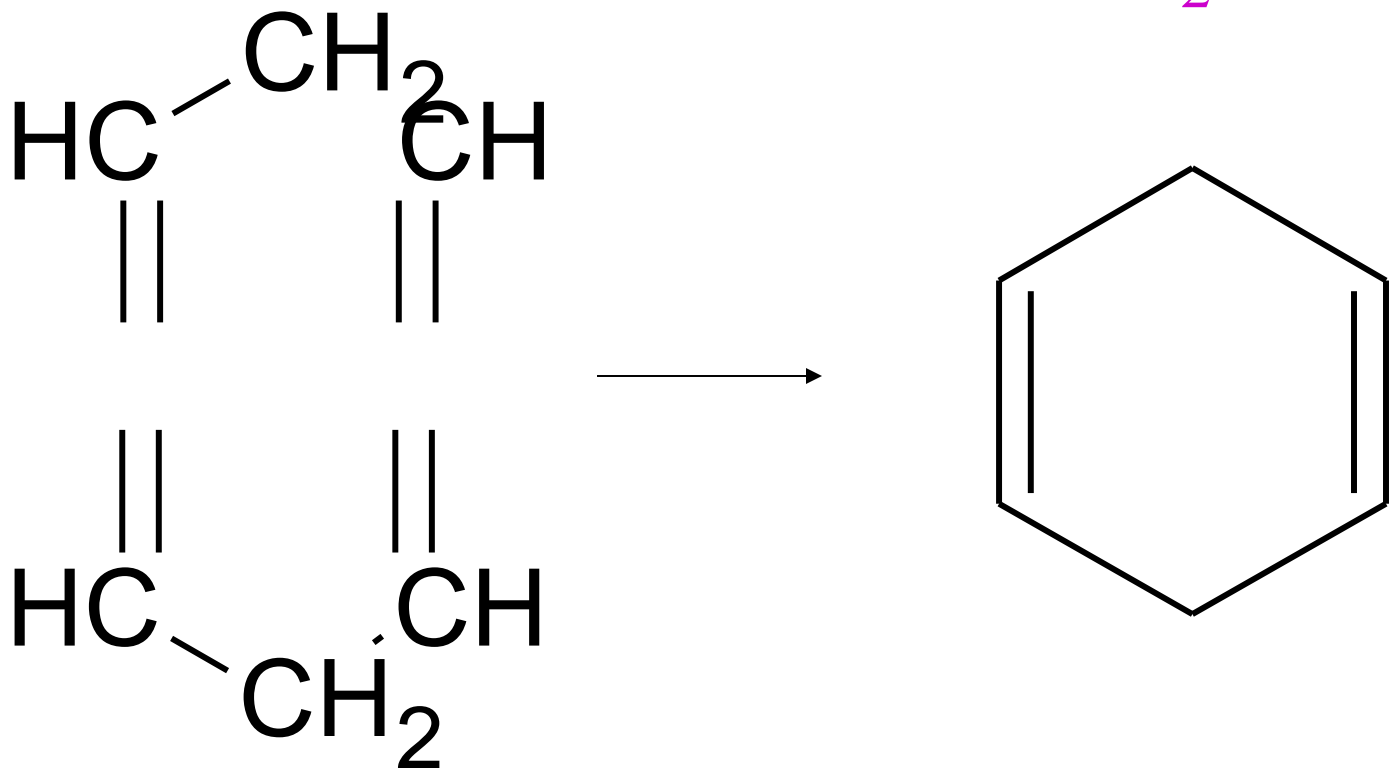
c. 

Câu (d)

d. a và b đều đúng

46. Ozon giải 1 mol anken A → 2 mol aldehyd malonic, cơ cấu của A là:

Aldehyd malonic: $O{=}CH{-}CH_2{-}CH{=}O$



a. 1,4-ciclohexadien

47. Anken C_7H_{14} cho pư ozon giải và pư oxy hóa bằng $KMnO_4$ đđ,t^o đều cho 2 sp là: C_4H_8O và C_3H_6O. Anken là:

C_4H_8O và C_3H_6O phải là ceton.

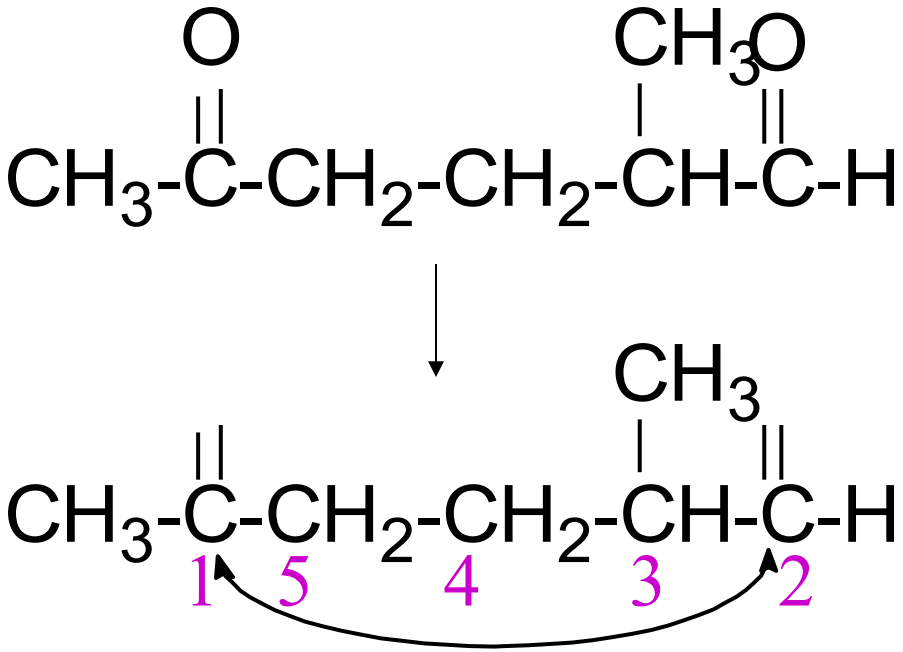
C_4H_8O → $CH_3-CH_2-C(=O)-CH_3$ → $CH_3-CH_2-C(=)-CH_3$

C_3H_6O → $CH_3-C(=O)-CH_3$ → $CH_3-C(=)-CH_3$

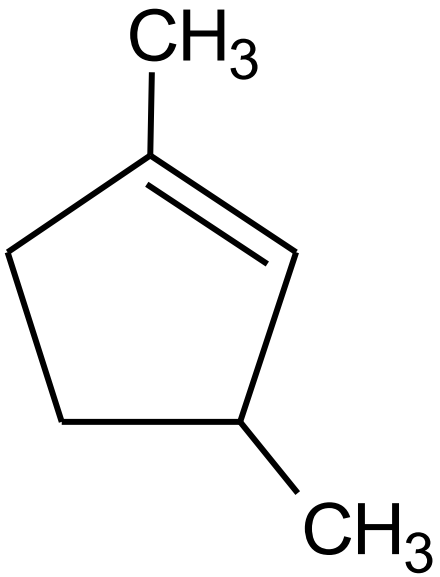
$CH_3-CH_2-C(=)-CH_3$ + $=C(-CH_3)-CH_3$ → $CH_3-CH_2-C(CH_3)=C(CH_3)-CH_3$

Câu (d)

48. Chất nào ozon giải cho sp sau:



→ A: mạch vòng



b. 1,3-Dimetylciclopenten

C. Ankin

49. Sản phẩm của pư dưới đây là:

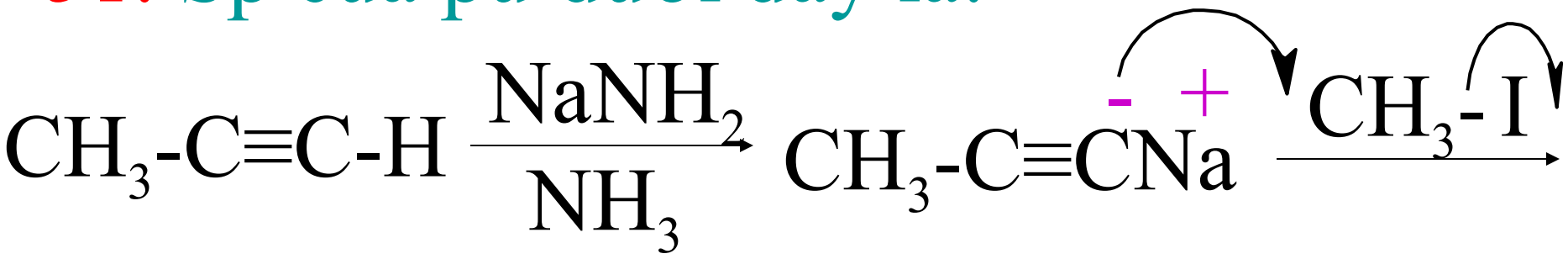
$$CH_3\text{-}CH_2\text{-}CHCl_2 \xrightarrow[t^o]{KOH/EtOH} CH_3\text{-}C{\equiv}CH$$

Câu (c)

50. Sp của pư dưới đây là:

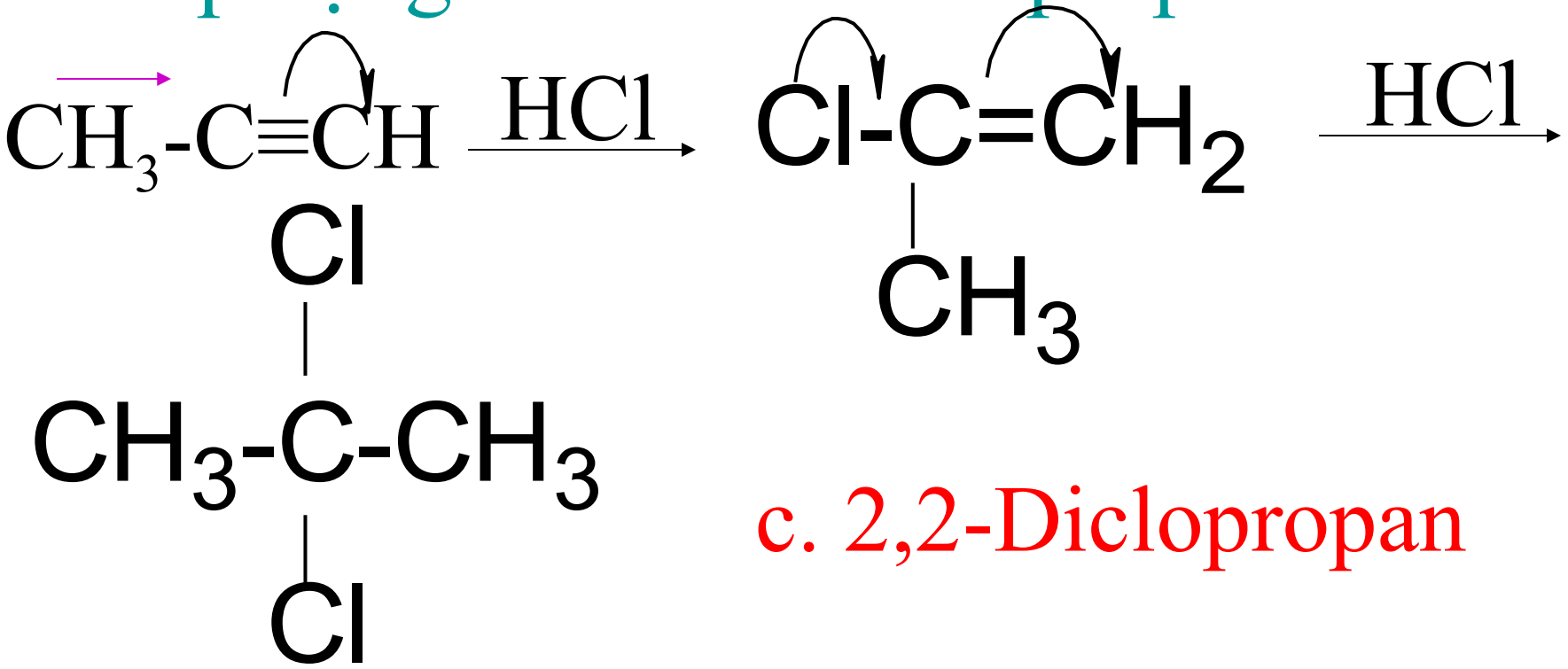
$$CH_3\text{-}C{\equiv}C\text{-}H \xrightarrow[NH_3]{NaNH_2} CH_3\text{-}C{\equiv}C^{-}Na^{+}$$ (a)

51. Sp của pư dưới đây là:



Câu (d) $CH_3-C\equiv C-CH_3$

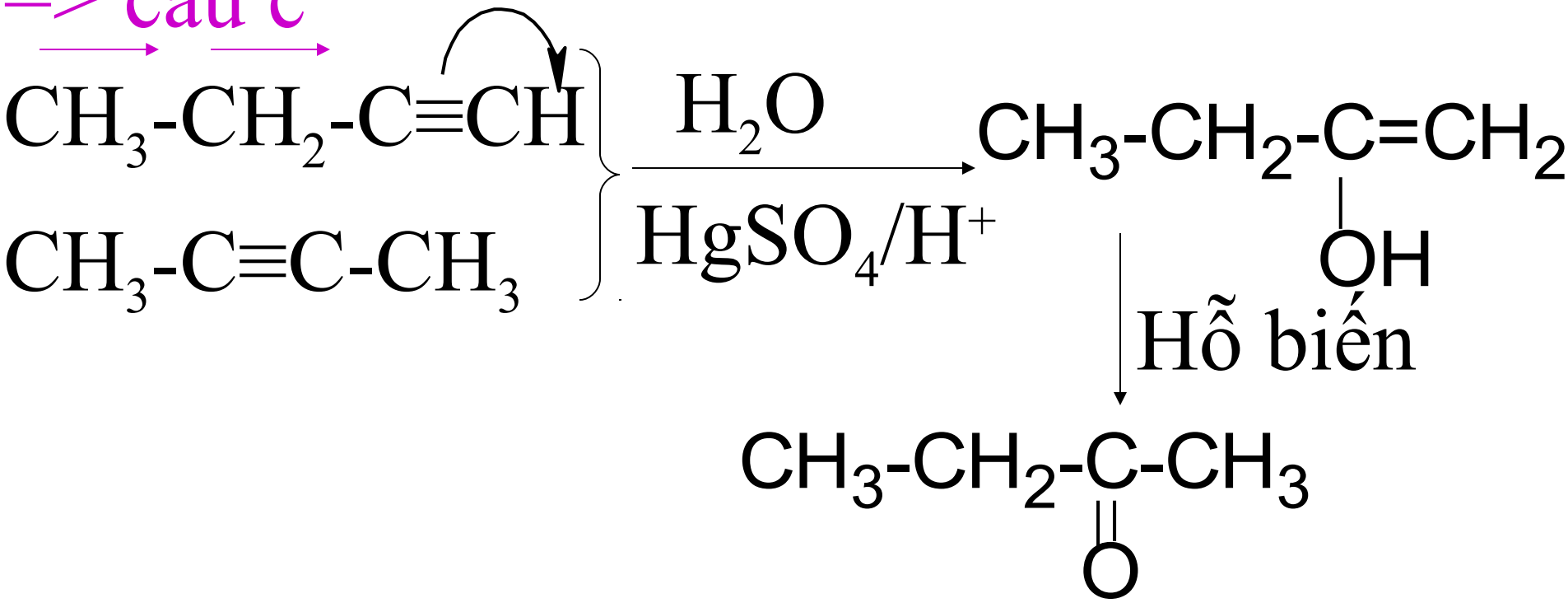
52. Sp cộng 2 lần HCl vào propin:

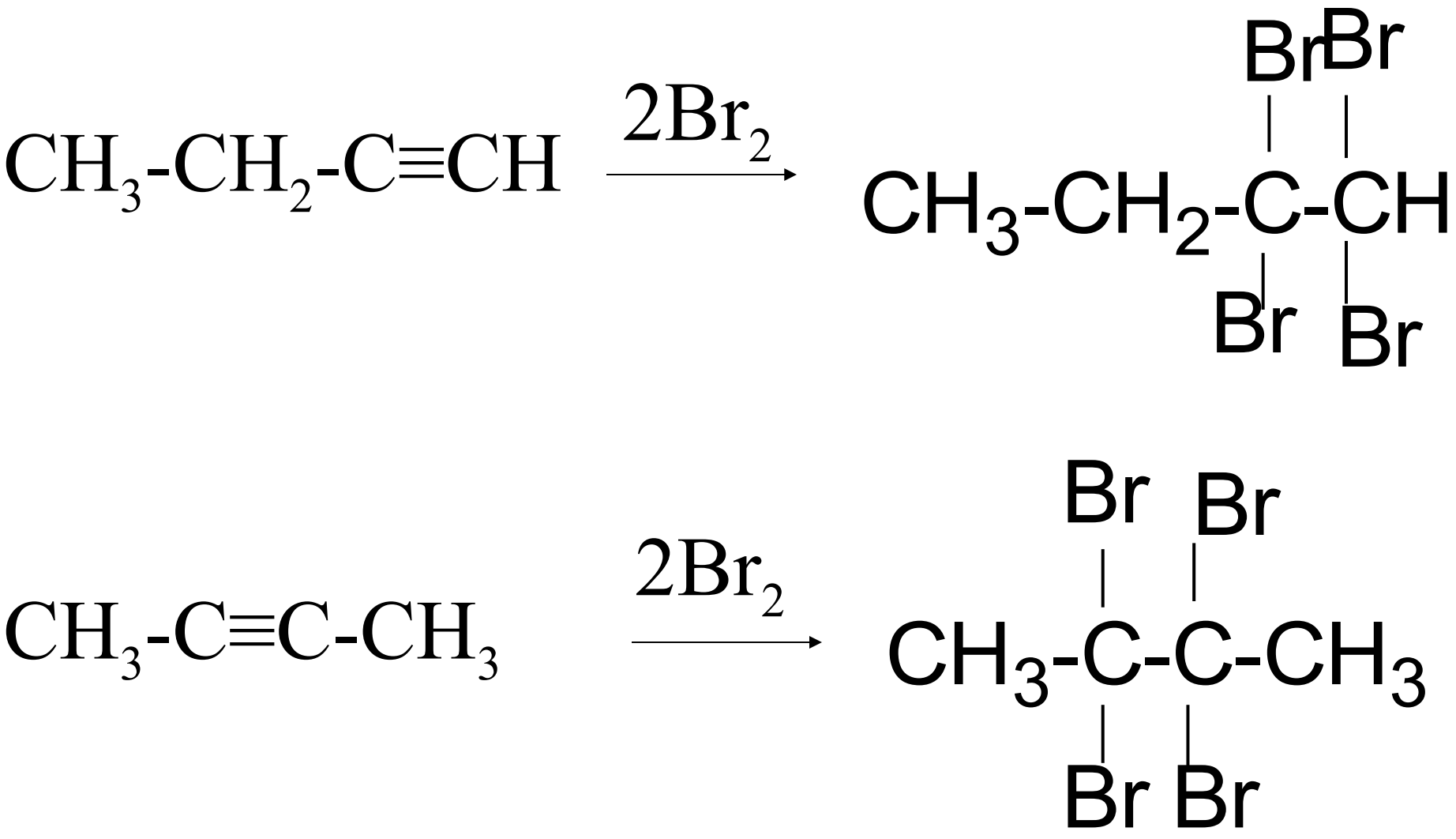


c. 2,2-Dicloropropan

53. 2 đồng phân có cùng CTPT là C_4H_6, khi pư với dd $HgSO_4/H^+$ thu được cùng sp.Nhưng khi pư với Br_2 dư thu được 2 sp khác nhau, 2 đồng ohân này là:

Pư với dd $HgSO_4/H^+$: cộng H_2O vào ankin => câu c



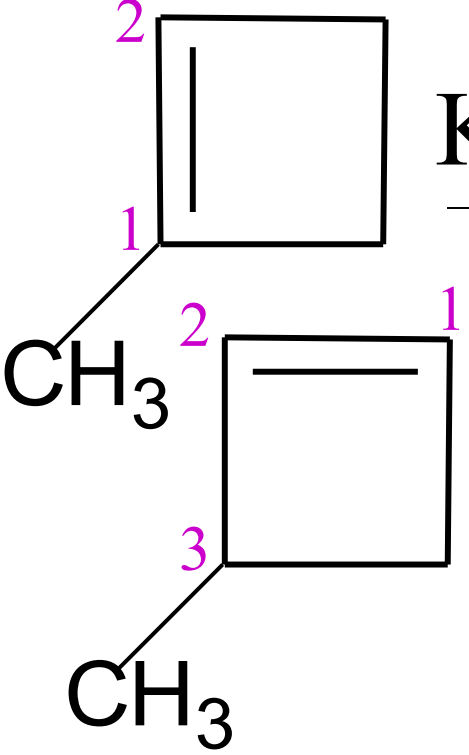


(c) Butin-1 và Butin-2

54. 2 đồng phân: $C_5H_8 \xrightarrow{H_2/Pt}$ Cùng 1 sp C_5H_{10}

$KMnO_4$đđ → { Diaxit; Axit có chứa nhóm xeton

$C_5H_8 \xrightarrow{H_2/Pt} C_5H_{10}$ { Có 1 mạch vòng; giống nhau



$KMnO_4$đđ →

$HOOC\text{-}CH_2\text{-}CH_2\text{-}C(=O)\text{-}CH_3$

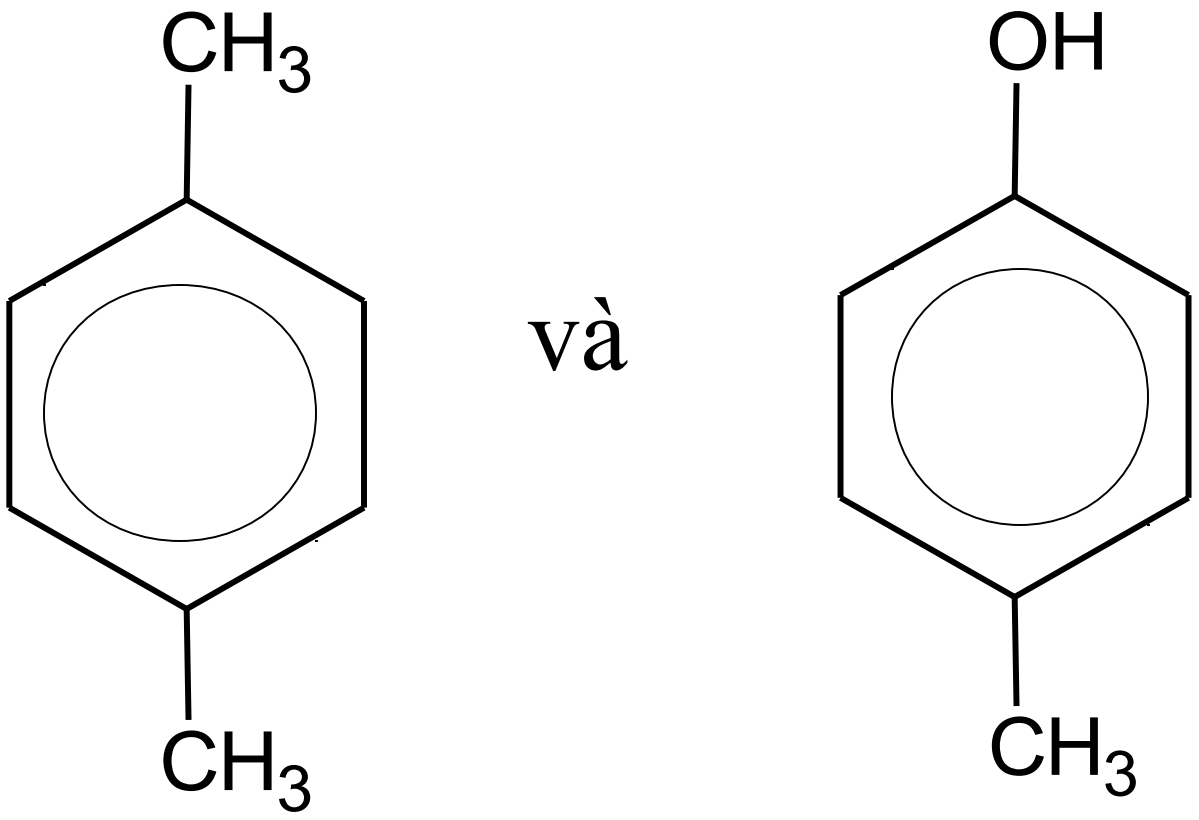
$KMnO_4$đđ →

$HOOC\text{-}CH_2\text{-}CH(CH_3)\text{-}COOH$

Câu (c)

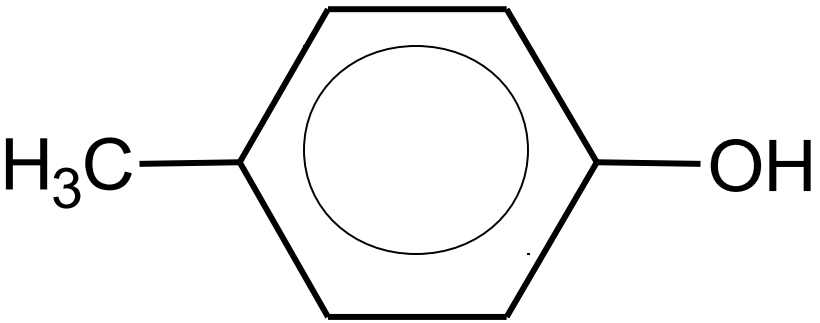
D. AREN

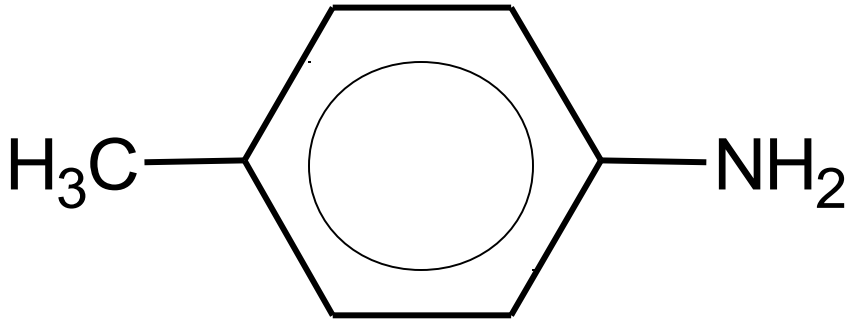
55. Tên gọi của 2 chất:

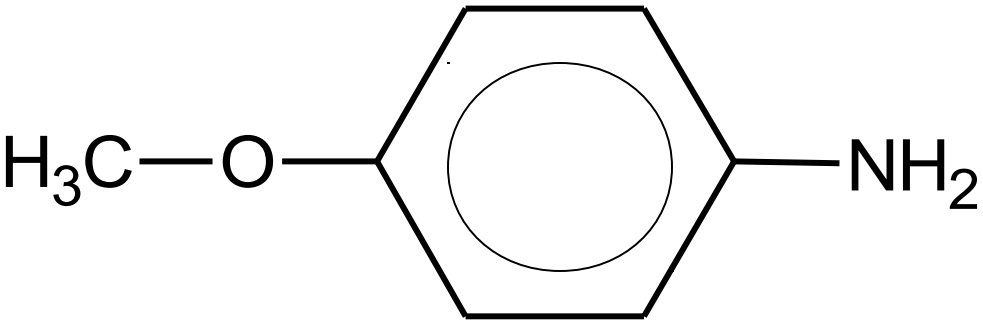


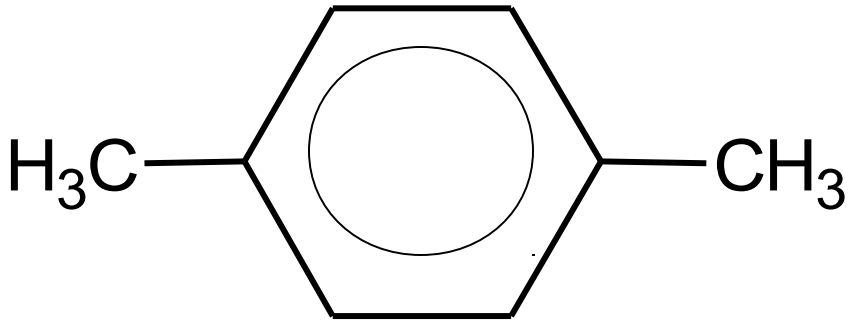
c. p-Xilen và p-Cresol

56. Tên gọi của: p-CH_3-C_6H_4OH; p-CH_3-$C_6H_4NH_2$; p-CH_3-O-$C_6H_4NH_2$; p-CH_3-$C_6H_4CH_3$ lần lượt là:



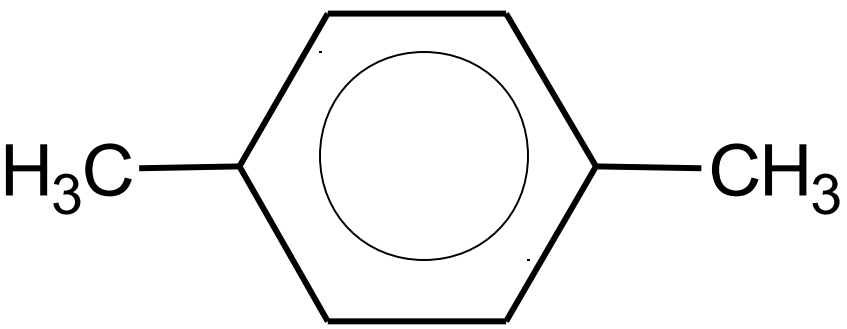


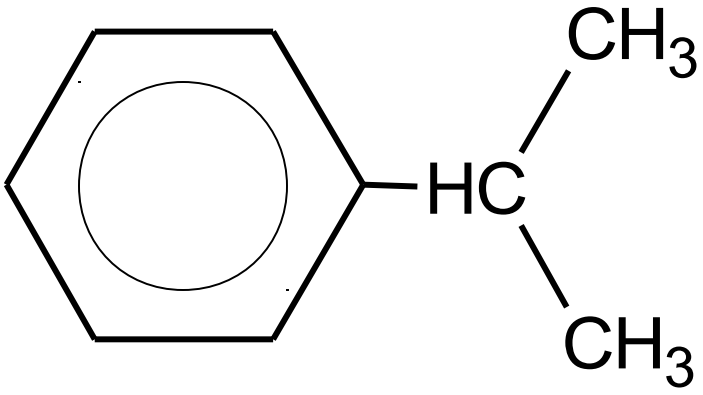


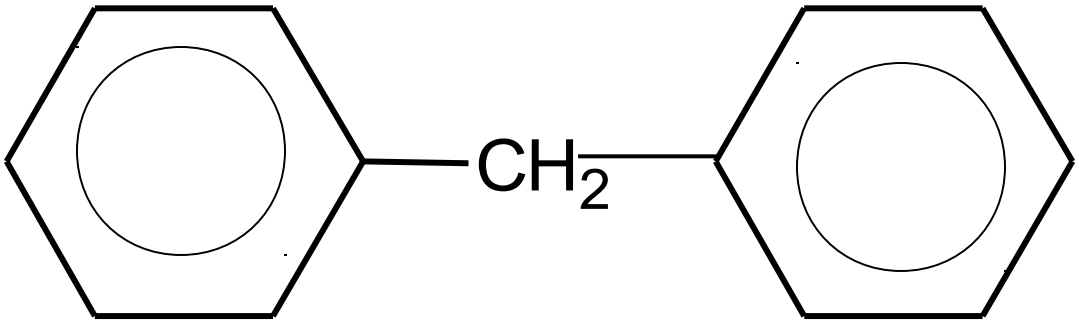


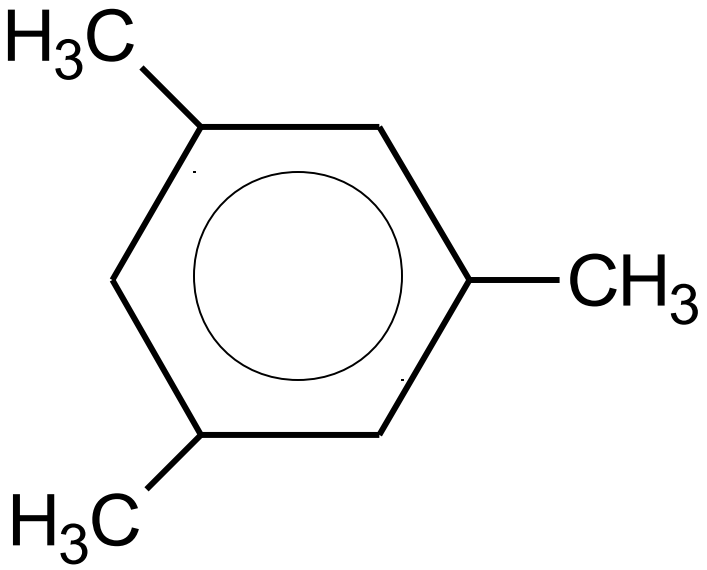
d. p-cresol, p-toludin, p-anisidin, p-xilen

57. Tên gọi:



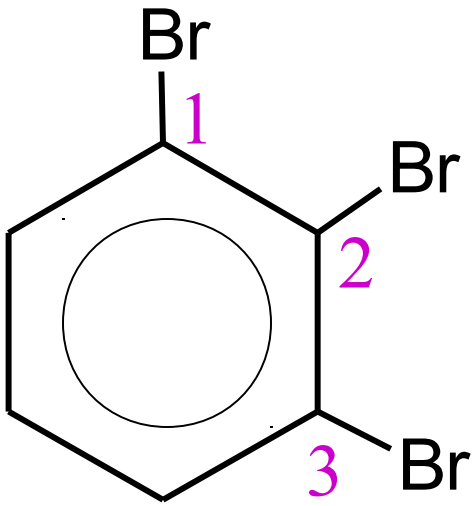


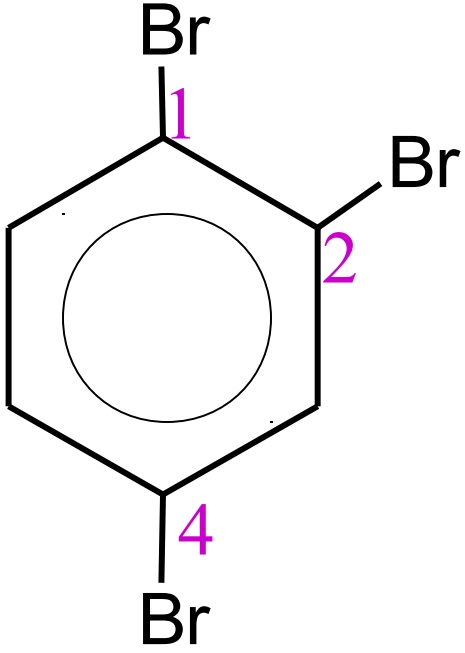


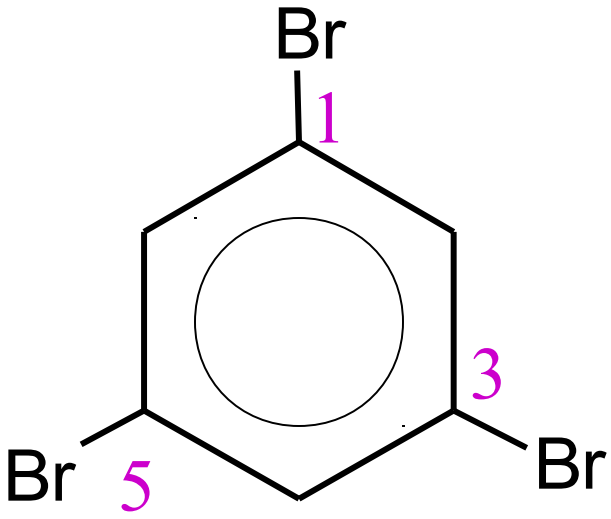


d. p-xilen, cumen, Diphenylmetan, mesitilen

58. Số đồng phân của tribrombenzen?

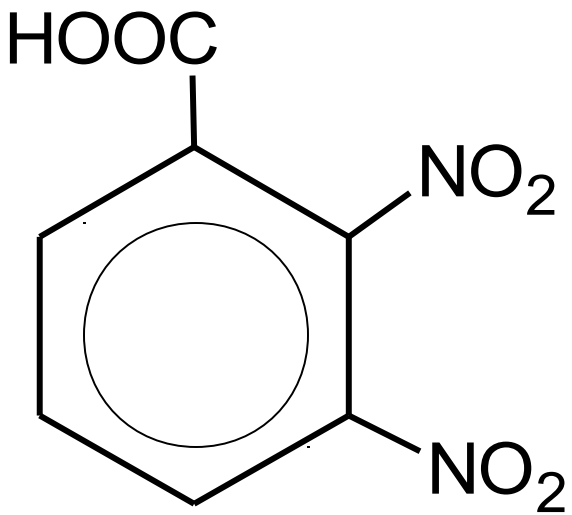


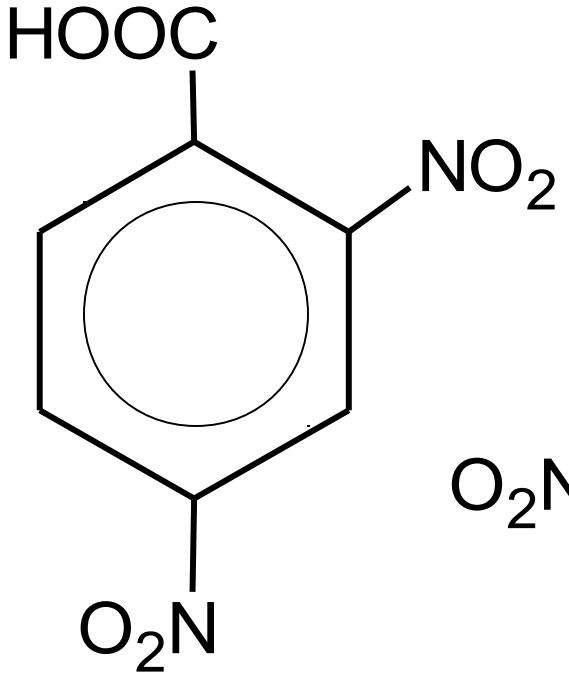


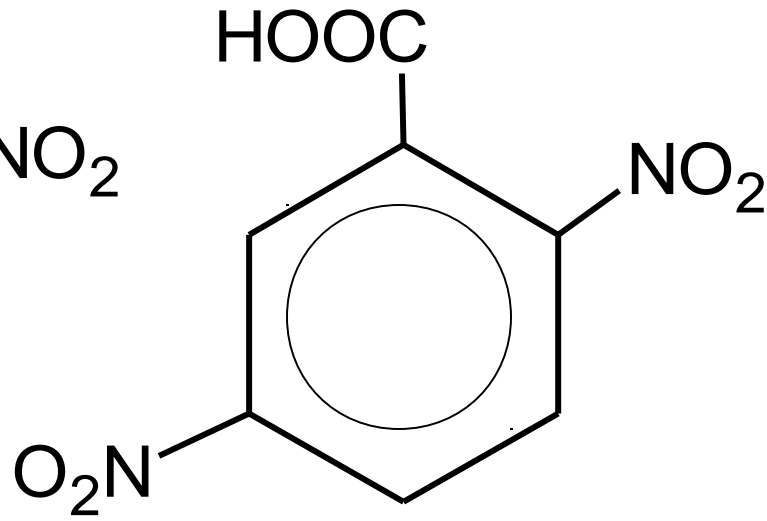


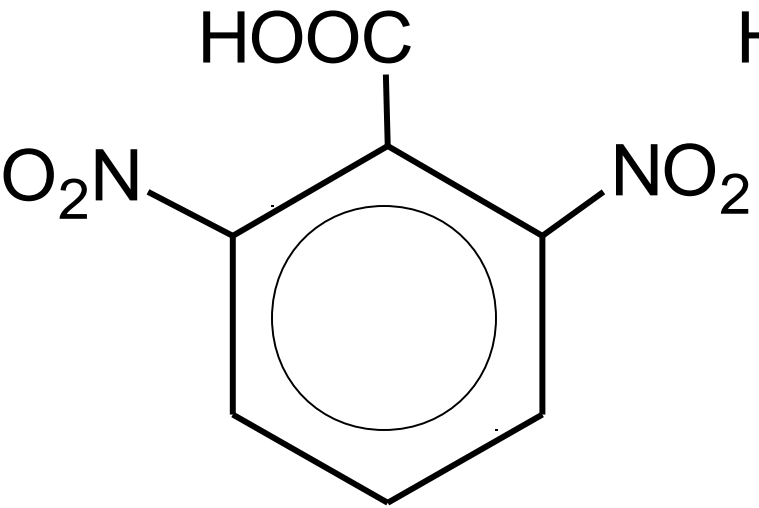
(a). 3

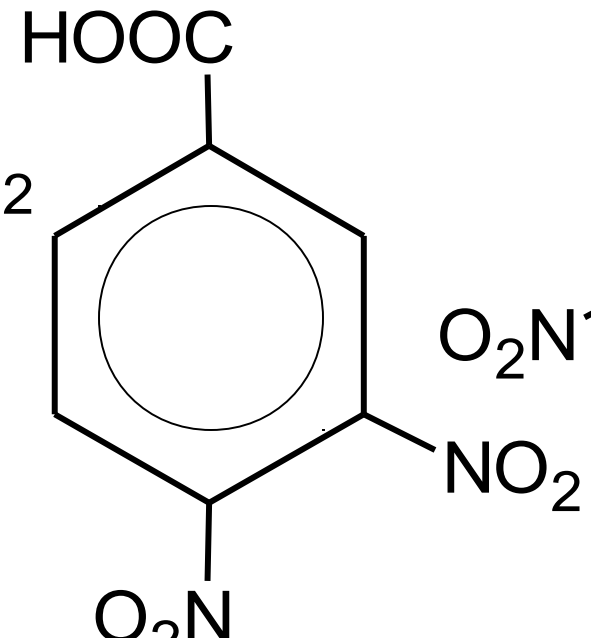
59. Số đồng phân của axit dinitrobezoic?

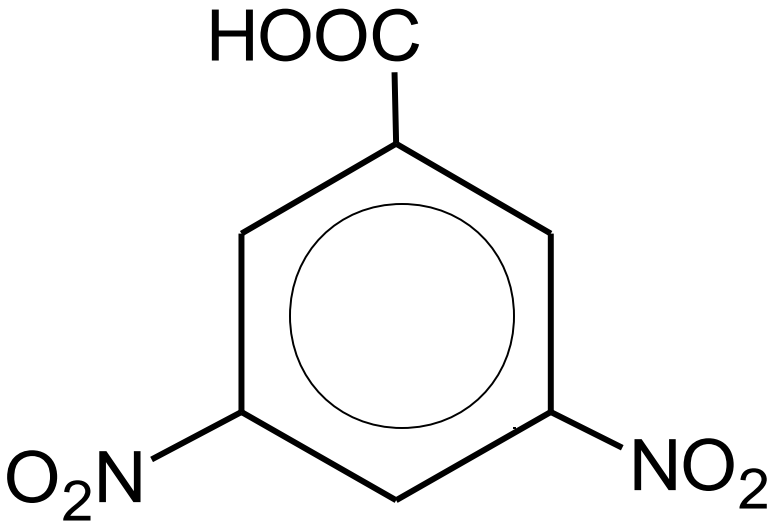






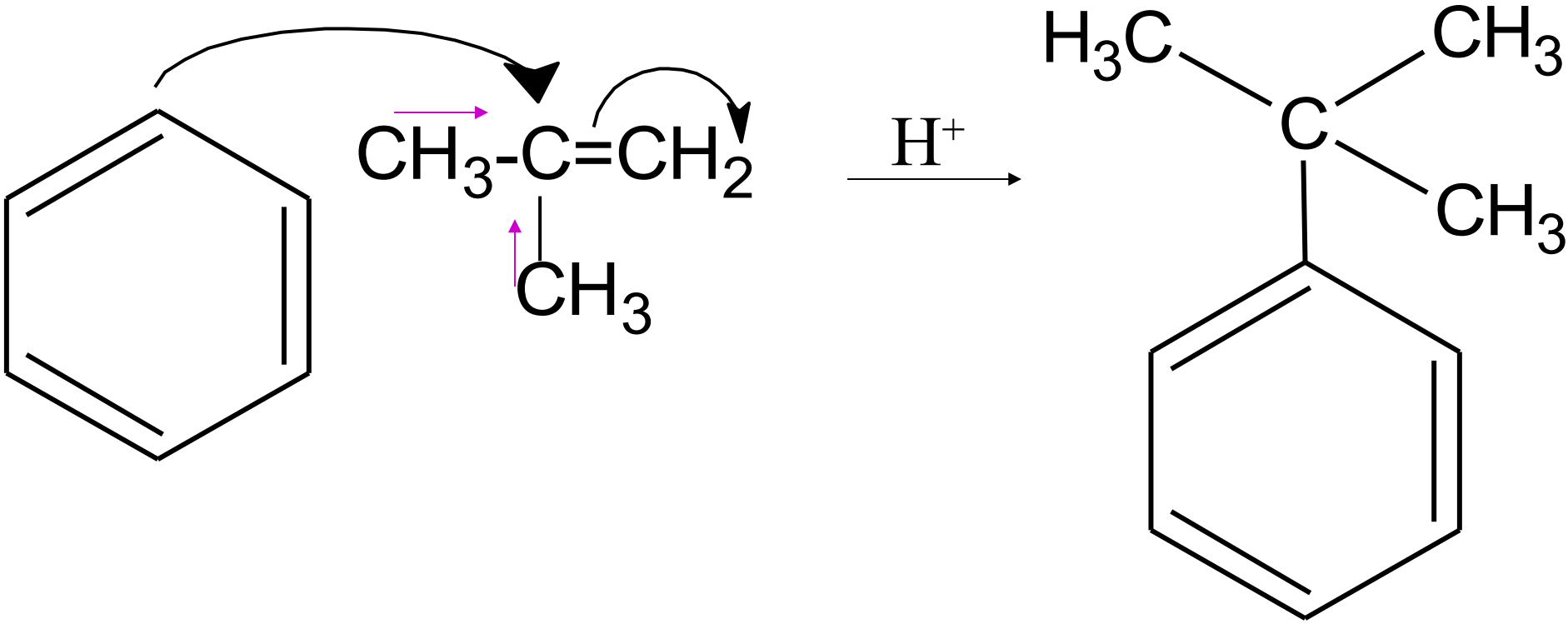






d. 6

60. Cho pư: Bezen + 2-metylpropen $\xrightarrow{H^+}$ A



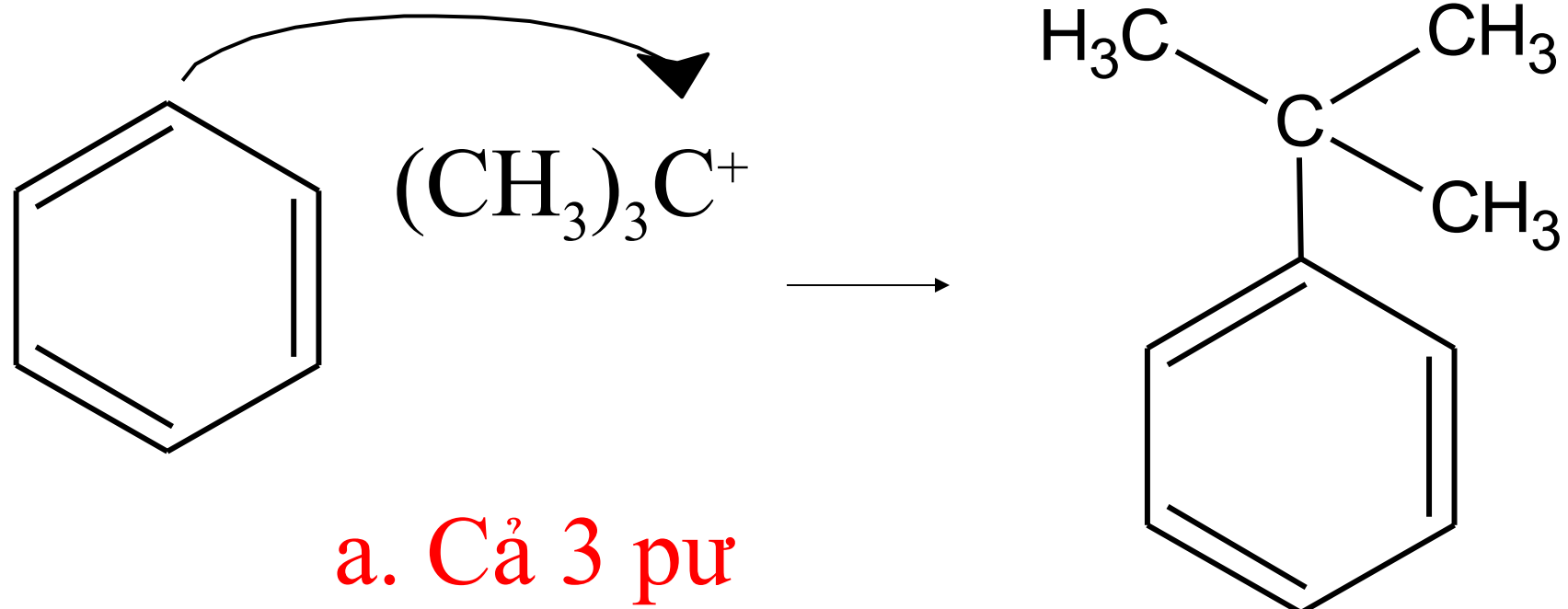
a. t-butylbenzen

61. Pư nào cho t-butylbenzen

(I). $C_6H_6 + (CH_3)_3CCl \xrightarrow{AlCl_3} (CH_3)_3C^+$

(II). $C_6H_6 + (CH_3)_2C{=}CH_2 \xrightarrow{H^+} (CH_3)_3C^+$

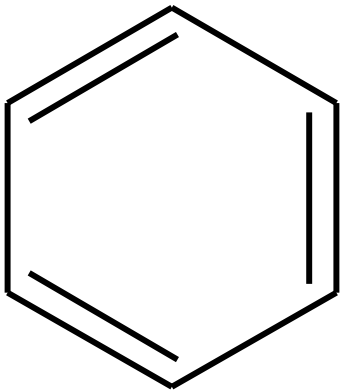
(III). $C_6H_6 + (CH_3)_3COH \xrightarrow{H^+} (CH_3)_3C^+$



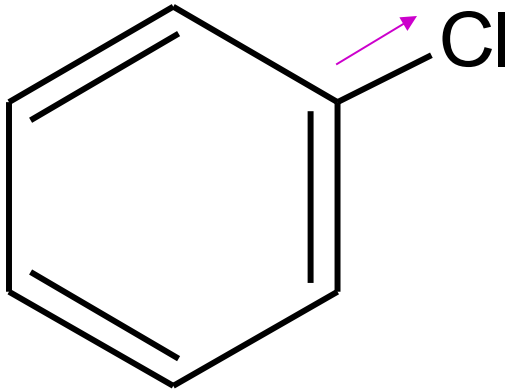
a. Cả 3 pư

62. Hợp chất có hoạt tính mạnh nhất trong pư sulfon hóa:

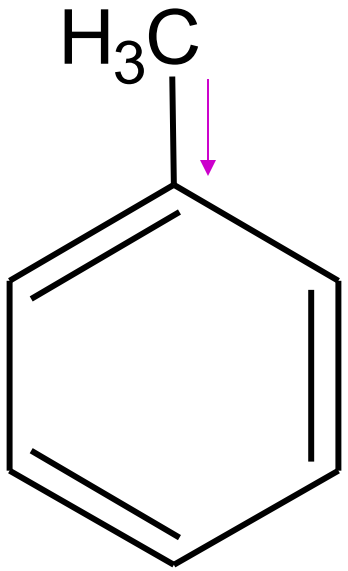
a. benzen:



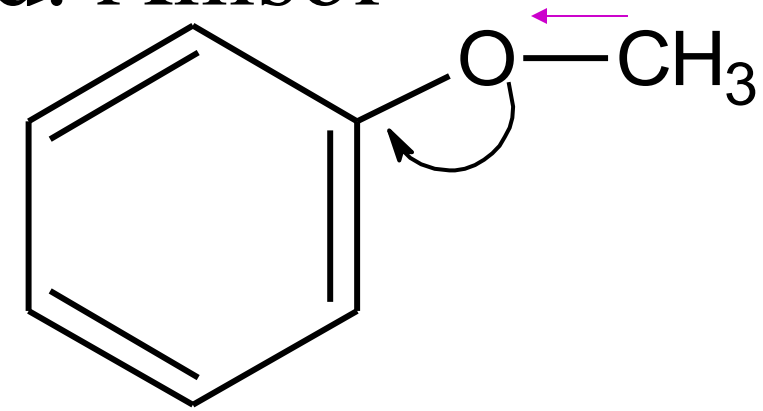
b. Clobenzen



c. Toluen



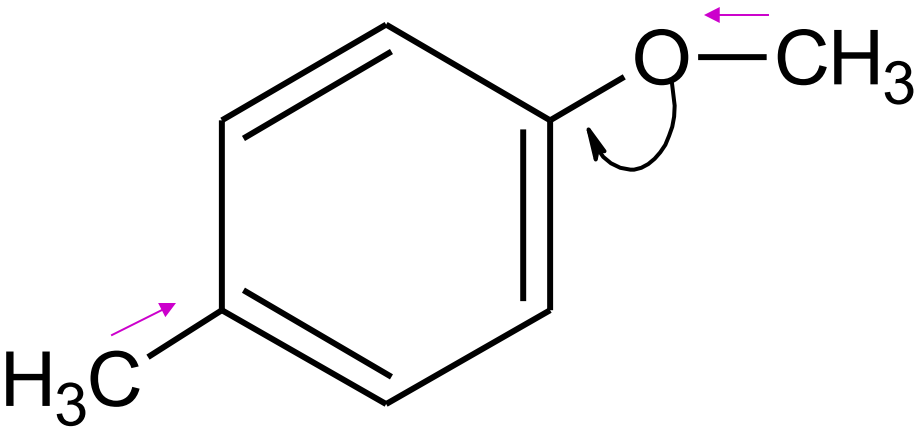
d. Anisol



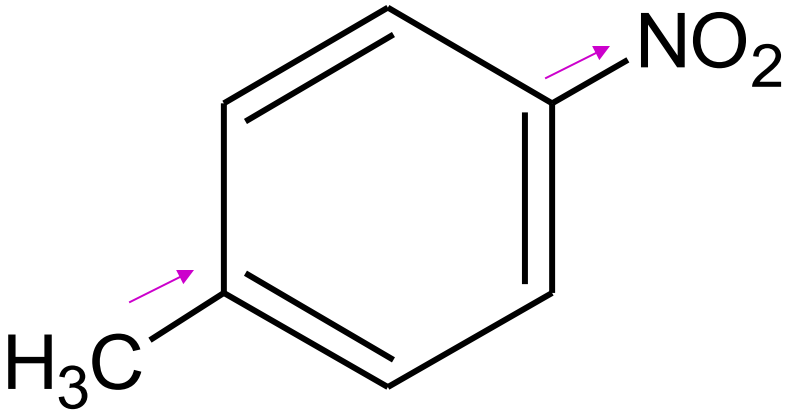
Câu (d)

63. Chất có hoạt tính mạnh nhất đối với pư nitro hóa:

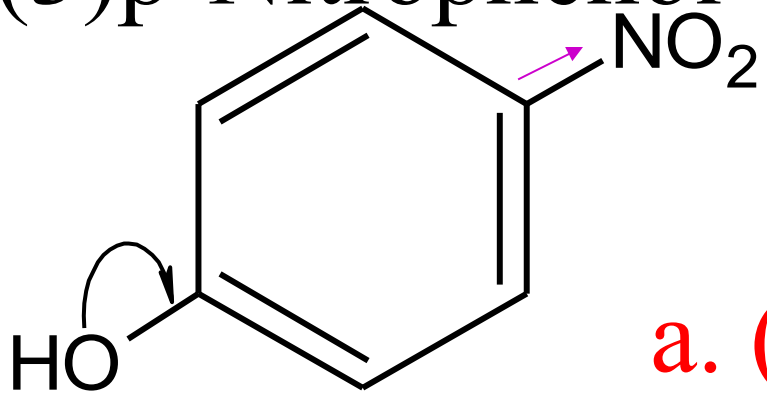
(1). p-Metoxitoluen



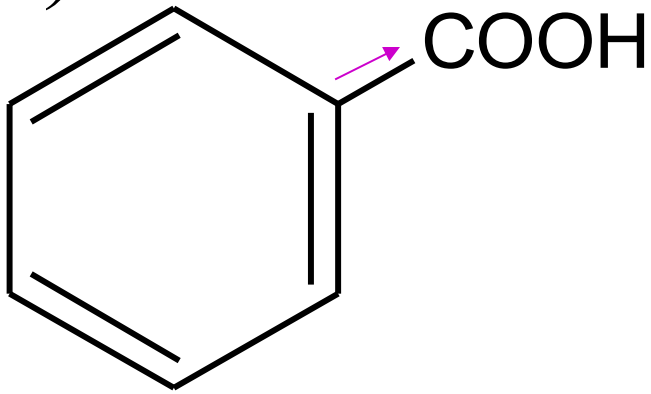
(2)p-Nitrotoluen



(3)p-Nitrophenol



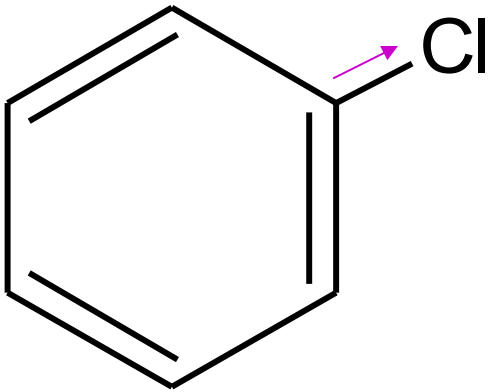
(4)Axit benzoic



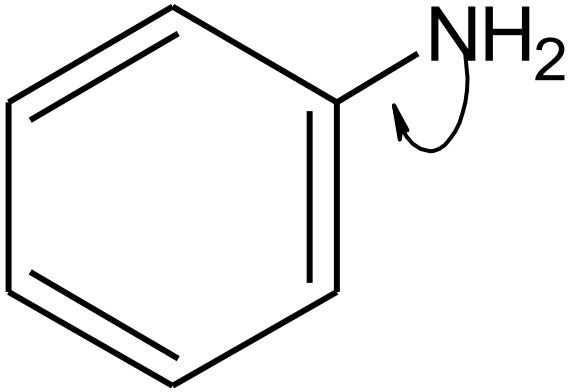
a. (1)

64. Thứ tự hoạt tính giảm dần đối với pư Clor hóa:

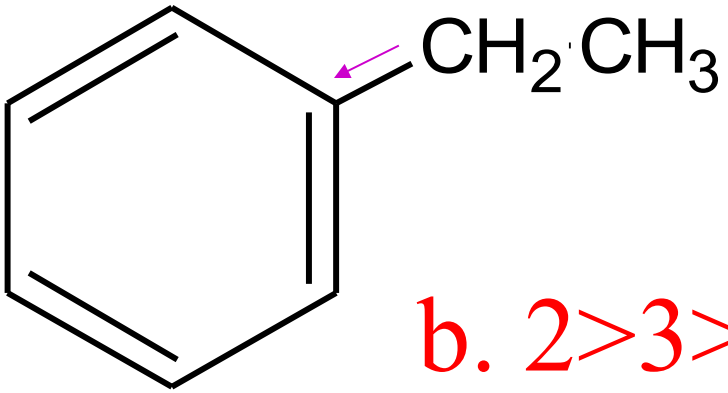
(1) Clobenzen



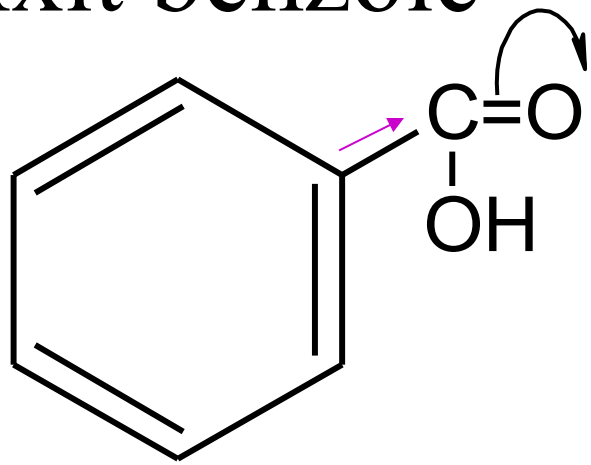
(2) Anilin



(3) Etylbenzen



(4) Axit benzoic



b. 2>3>1>4

65. Nhóm tăng hoạt định hướng orto, para:

a. –N=O b. –O-CH_3 c. –$COCH_3$ d. –NO_2

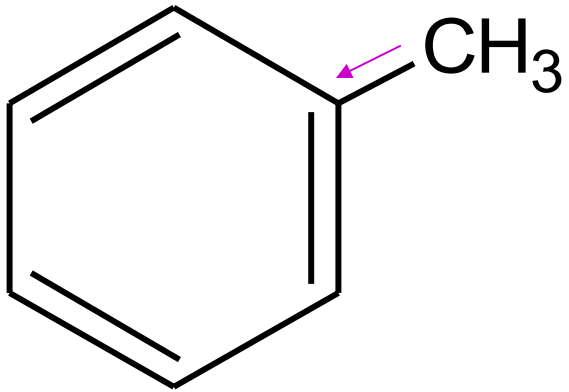
66. Nhóm định hướng orto, para:

a. –$NHCOCH_3$ b. –$COCH_3$

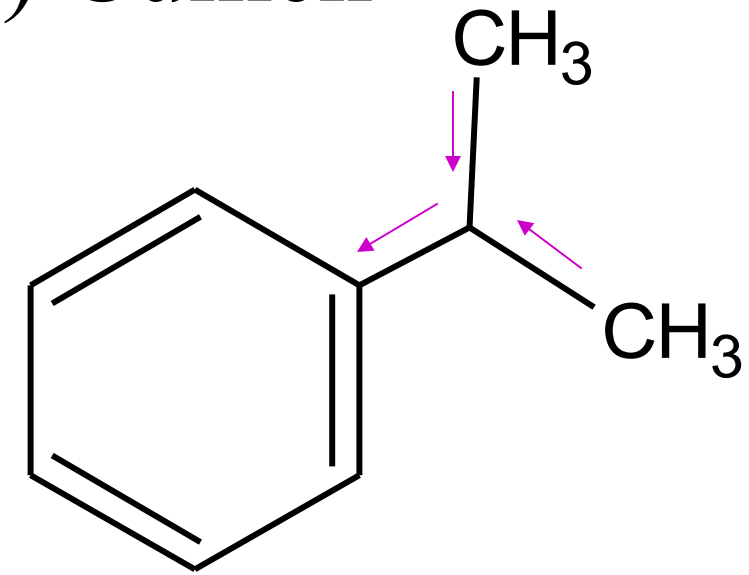
c. –CO_2H d. -CN

67. Chất cho pư thế thân electron tại vị trí orto, para?

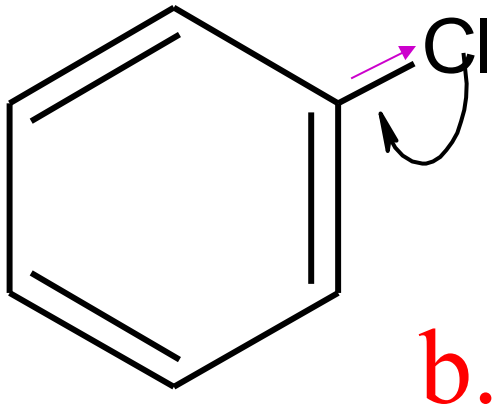
(A) Toluen



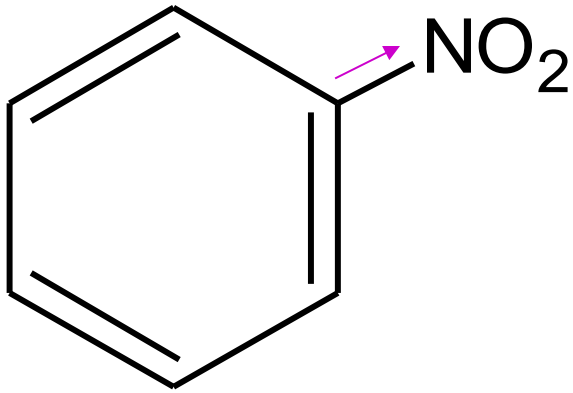
(B) Cumen



(C) Clobenzen

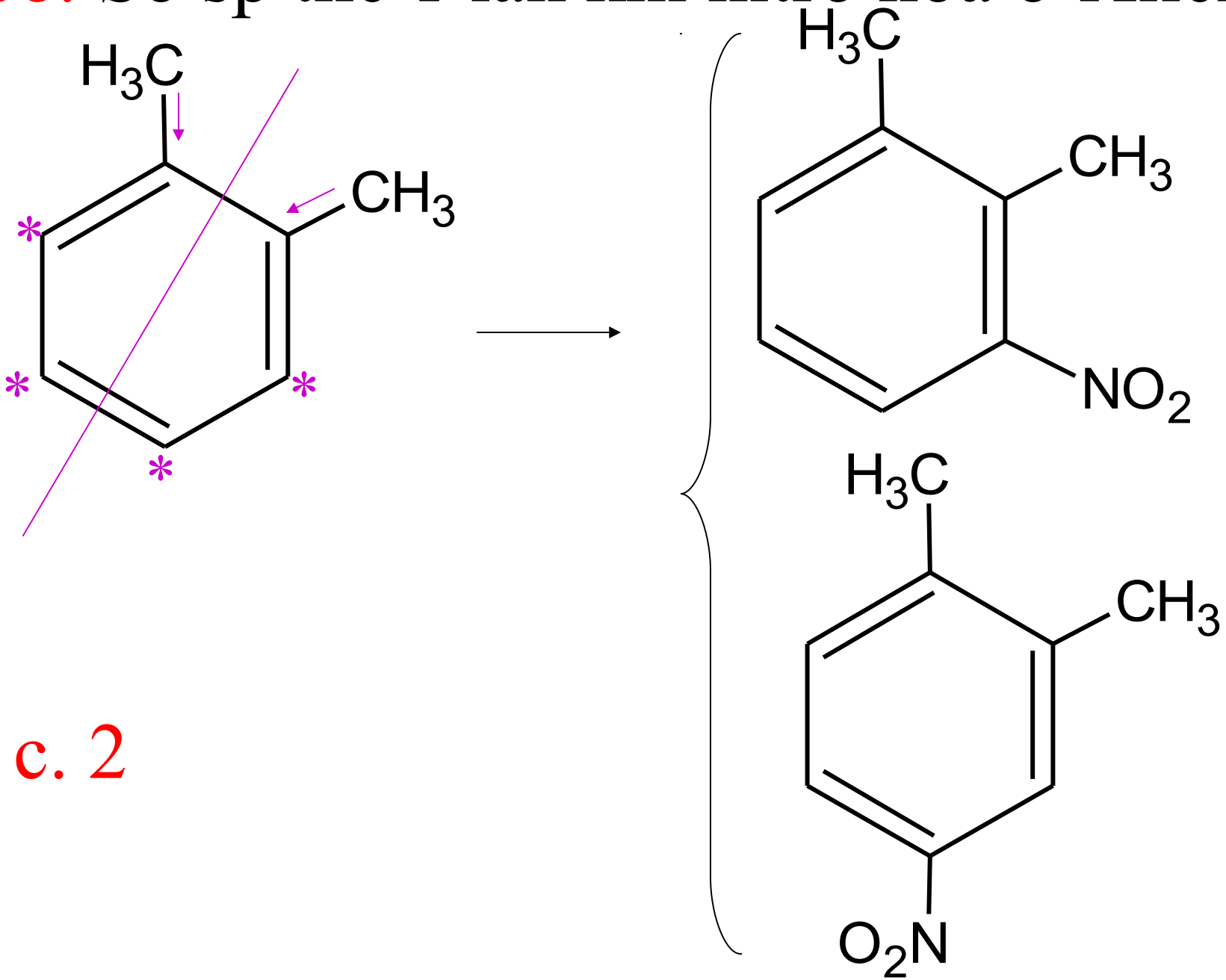


(D) Nitrobenzen



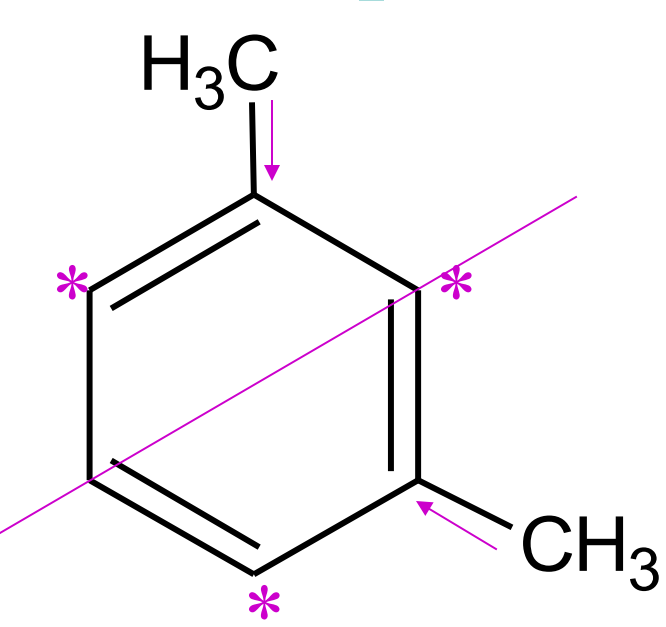
b. A,B,C

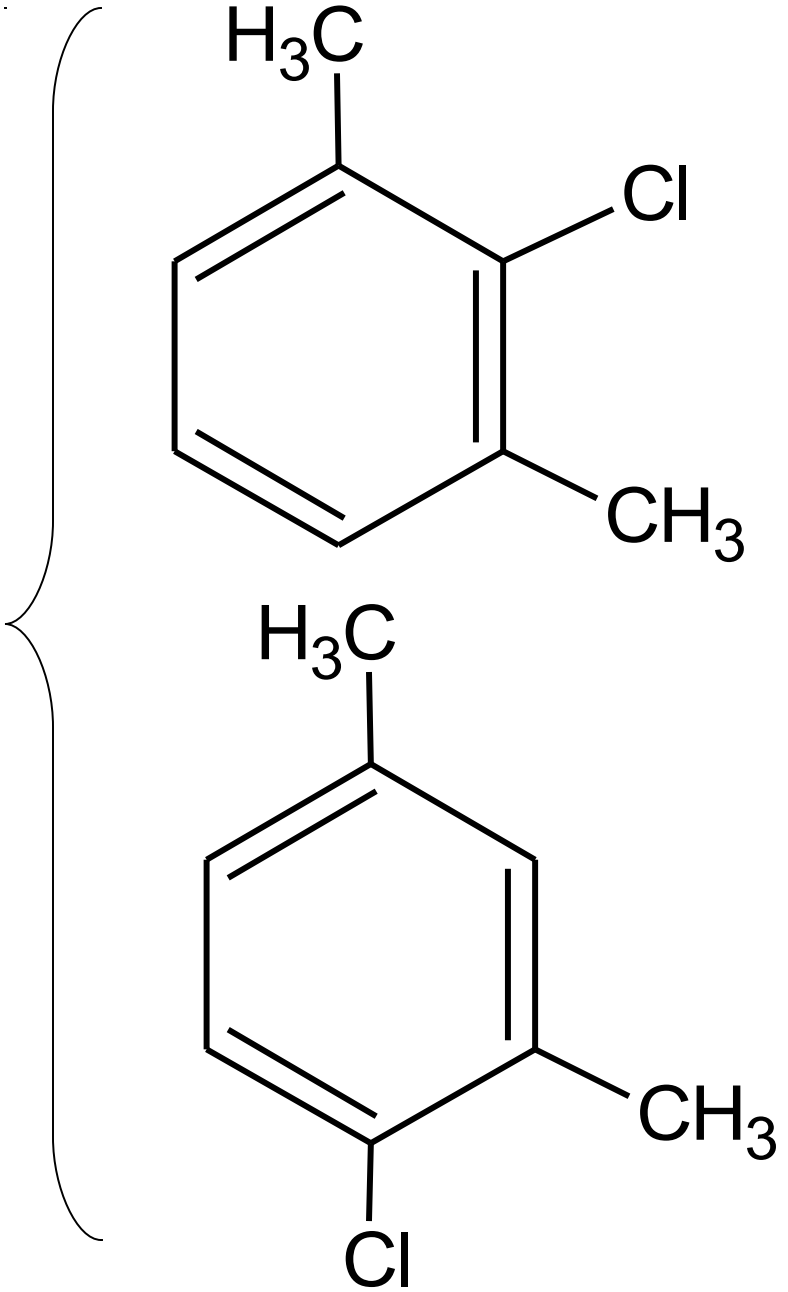
68. Số sp thế 1 lần khi nitro hóa o-Xilen:



c. 2

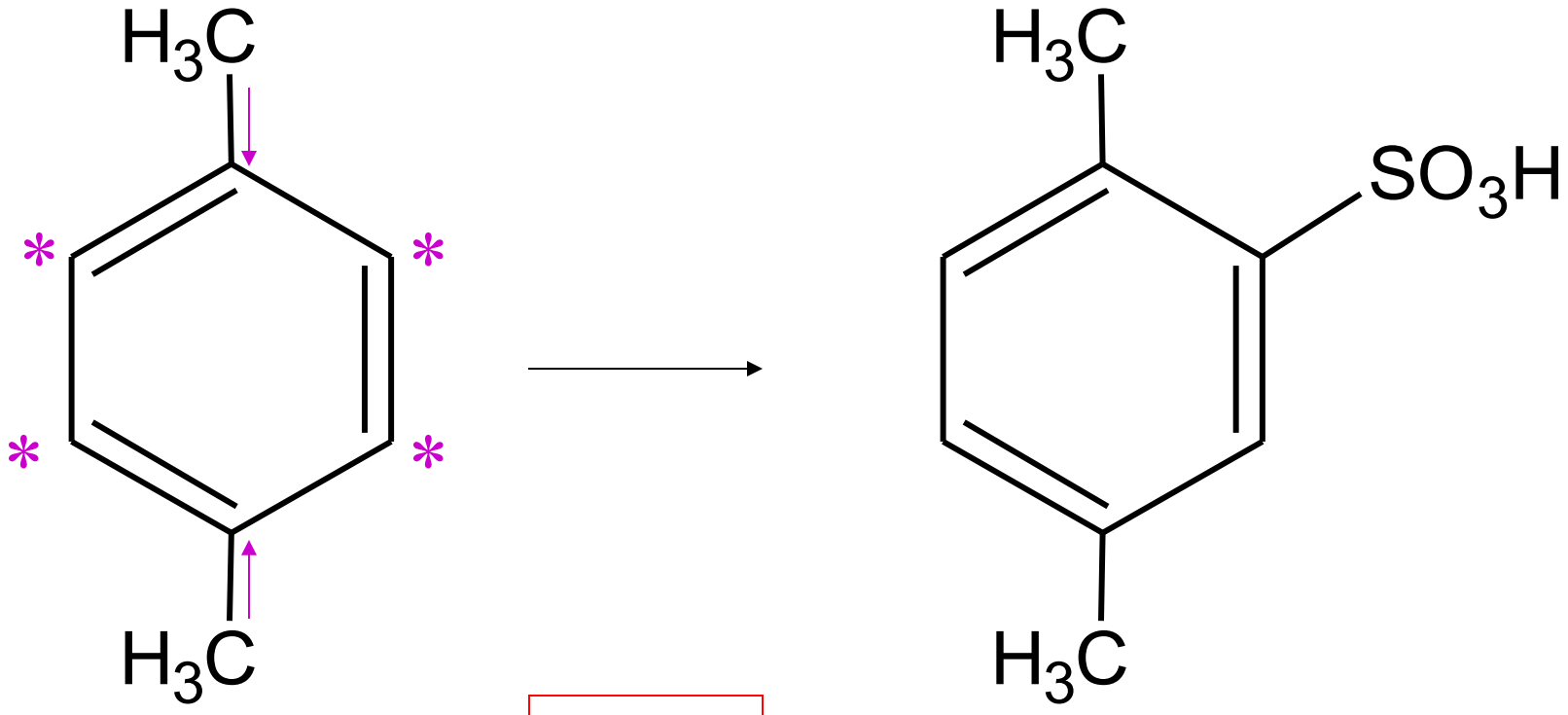
69. Số sp thế 1 lần khi Clo hóa m-Xilen





b. 2

70. Số sp thế 1 lần khi sulfon hóa p-Xilen

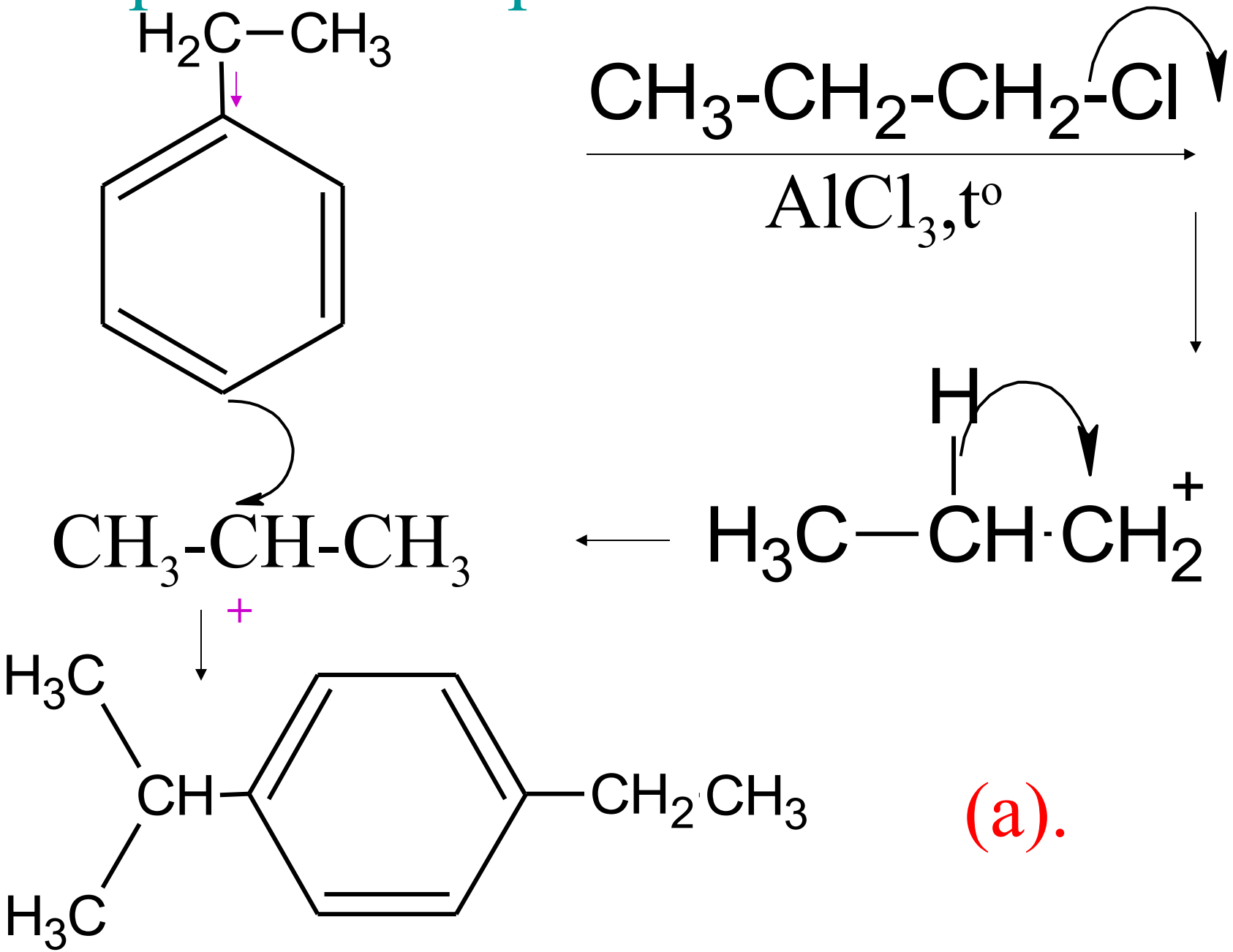


4 vị trí thế là 1 | a. 1

71. $C_8H_{10} \xrightarrow[Fe]{Cl_2}$ sp thế 1 lần

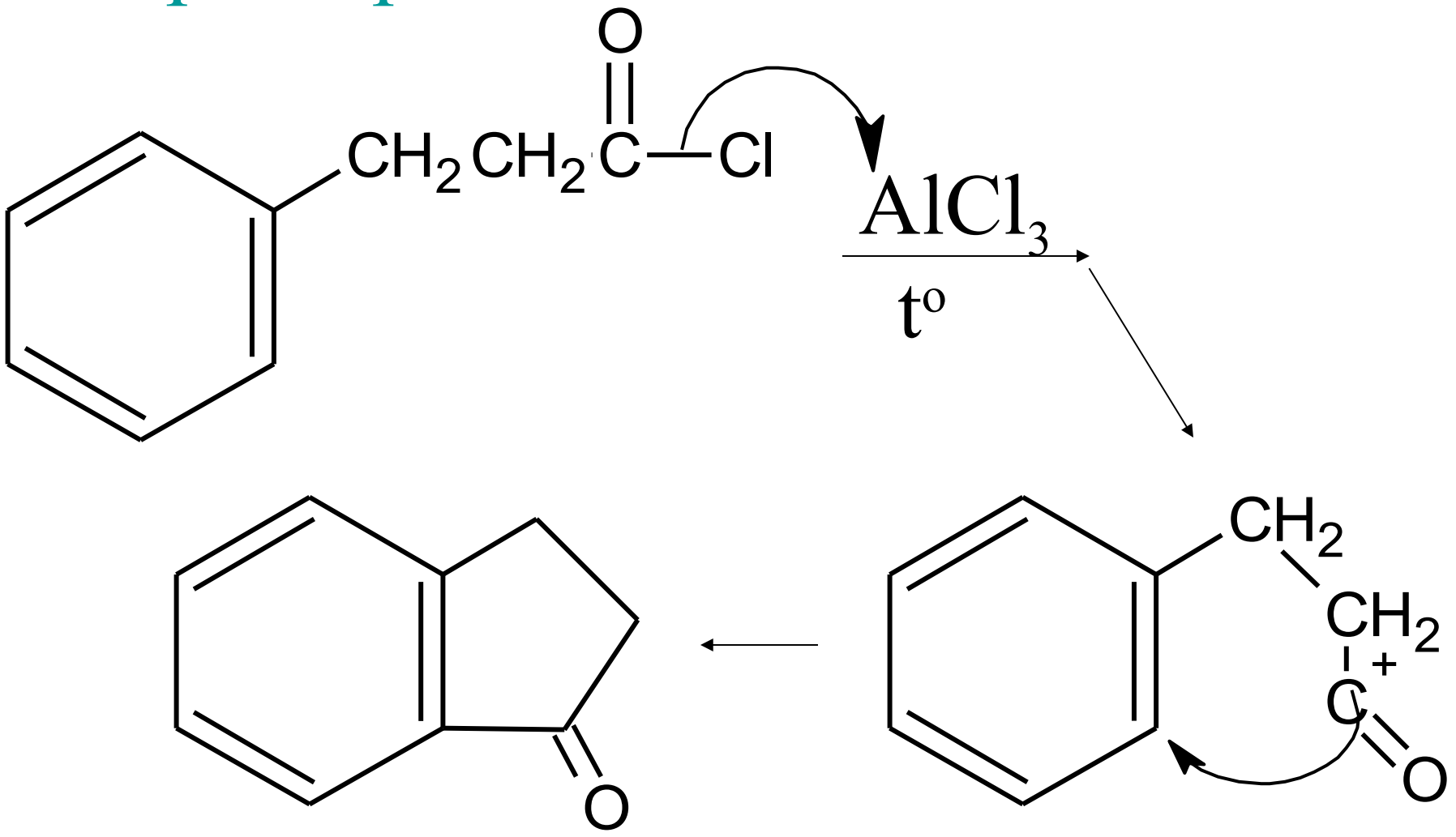
d. p-Xilen

72. Sp chính của pư:



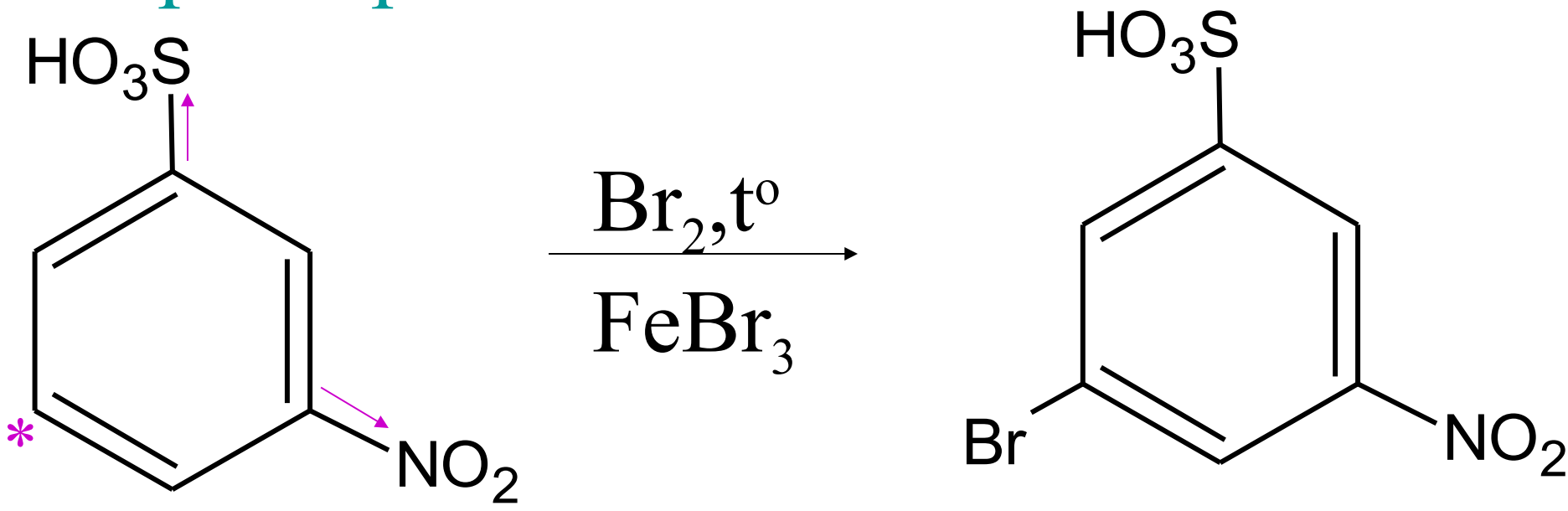
(a).

73. Sp của pư:



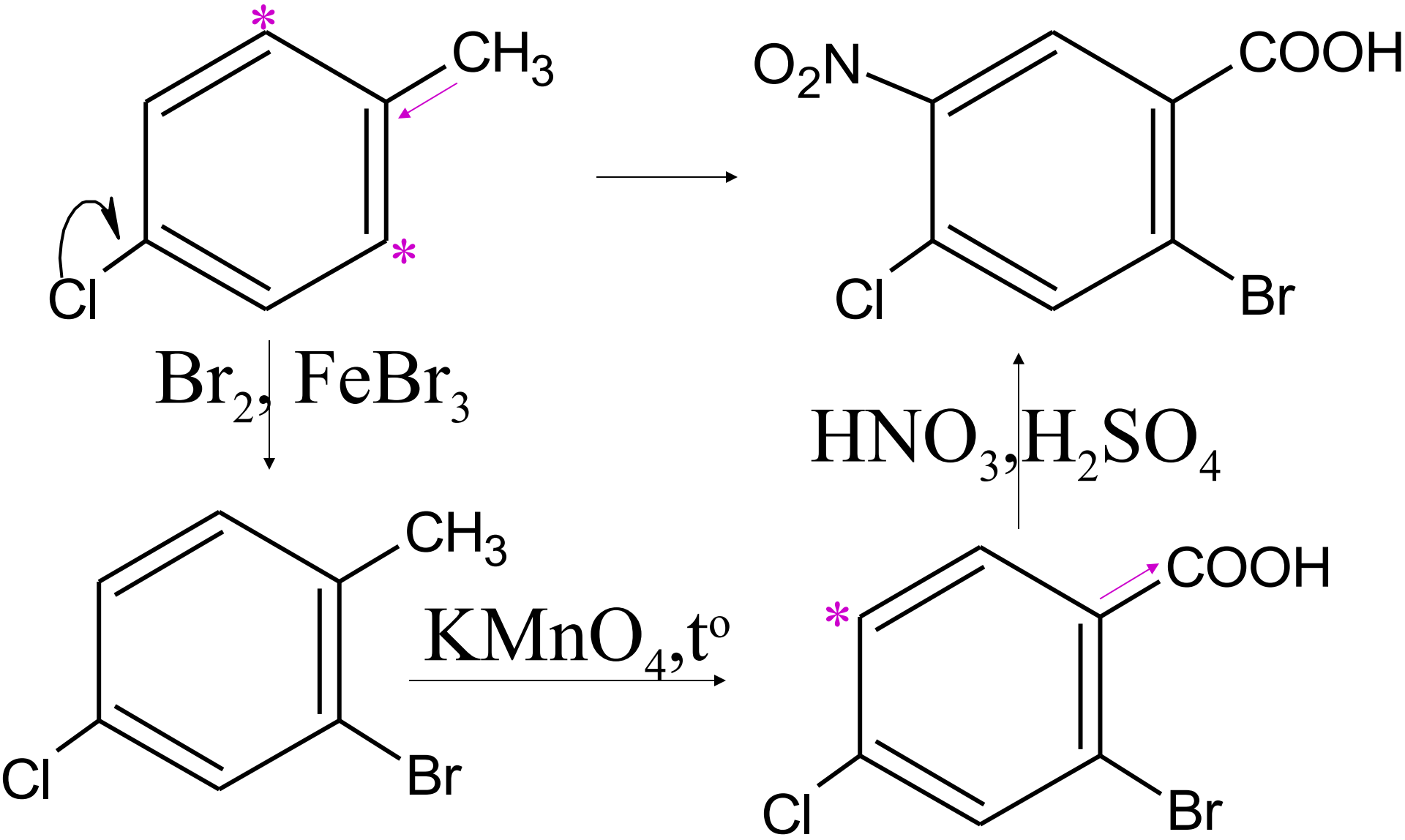
Câu (c)

74. Sp của pư:



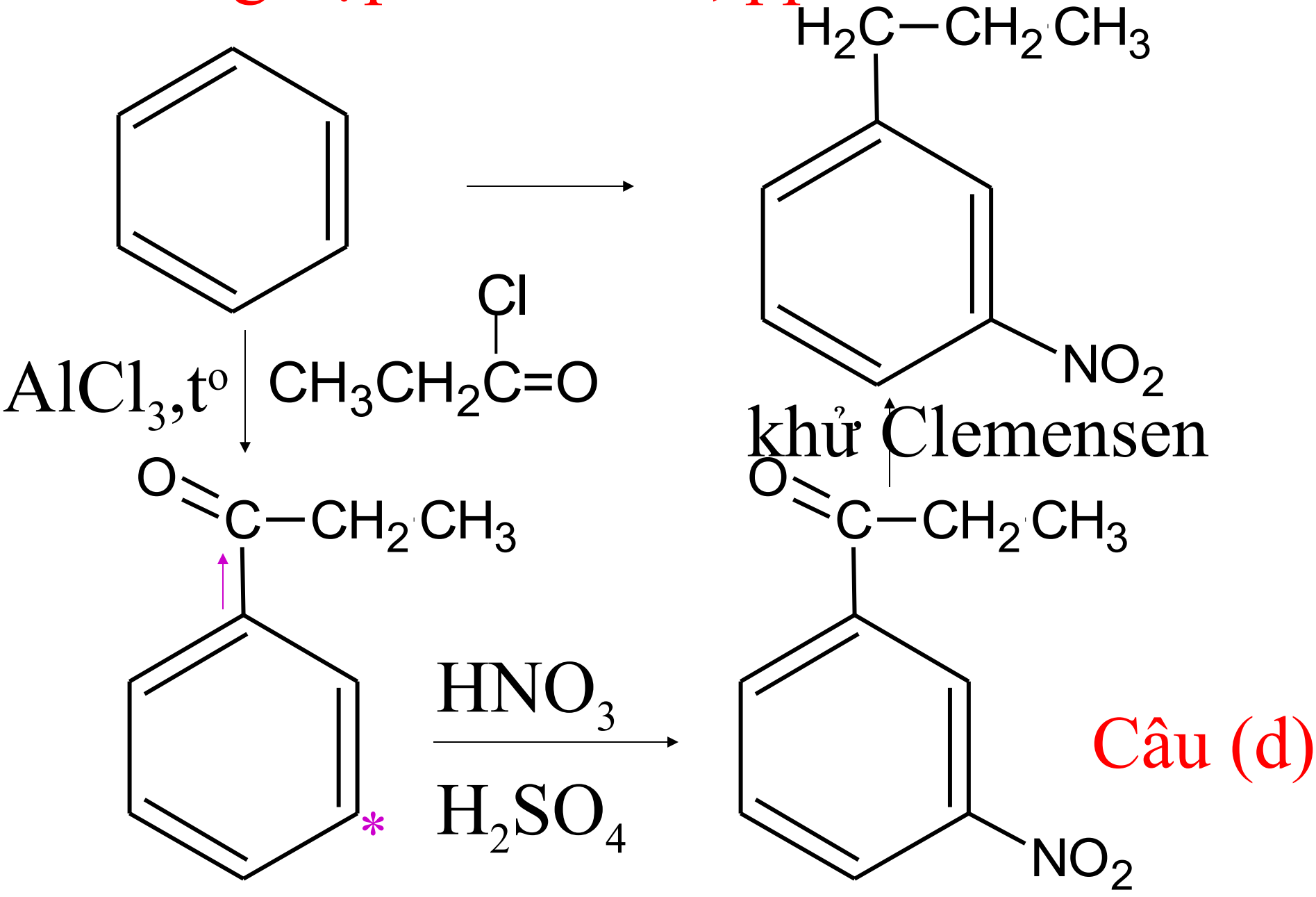
Câu (b)

75. Chọn quy trình



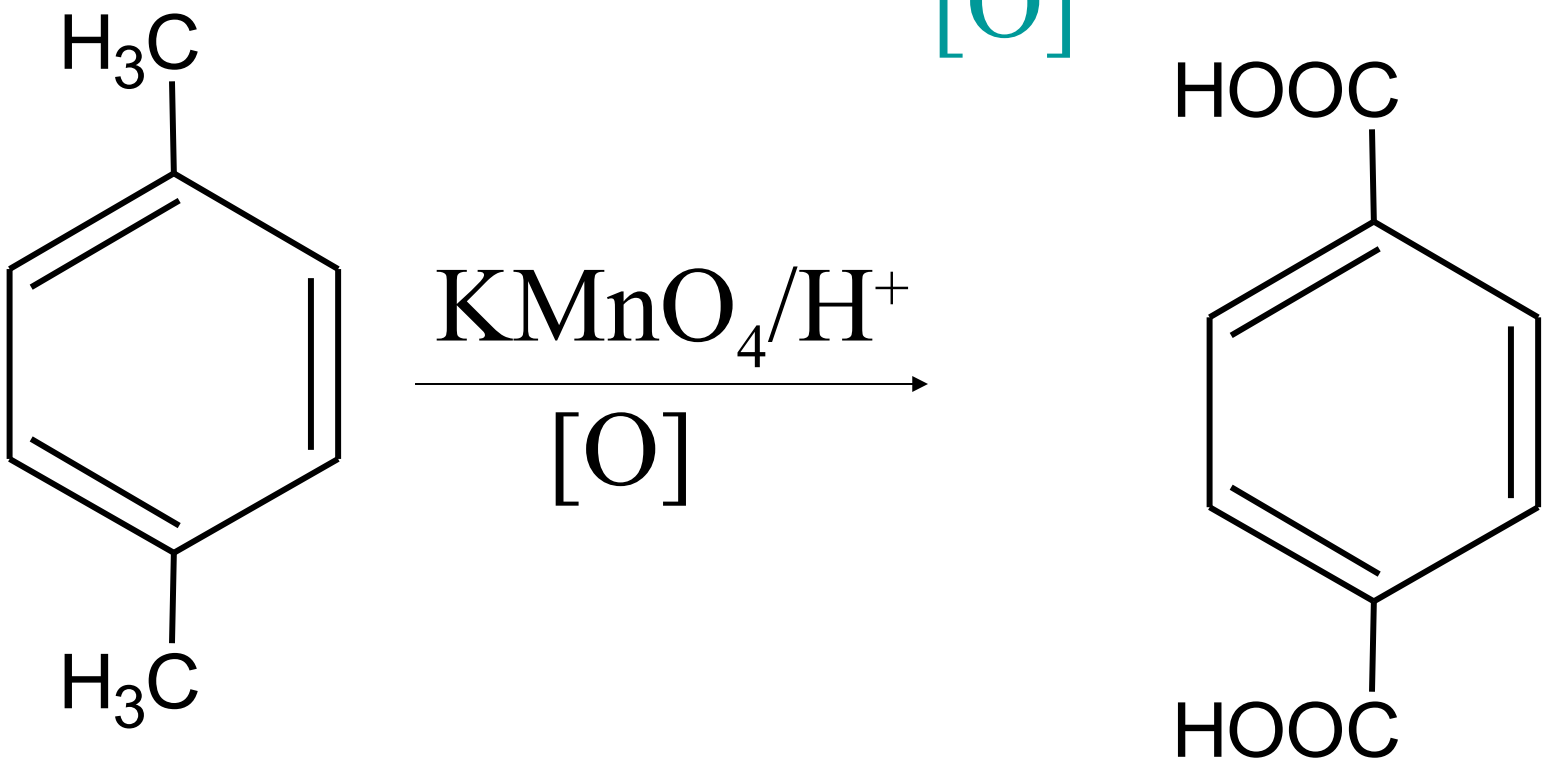
Câu (a)

76. Tổng hợp từ benzen, pp tốt nhất?



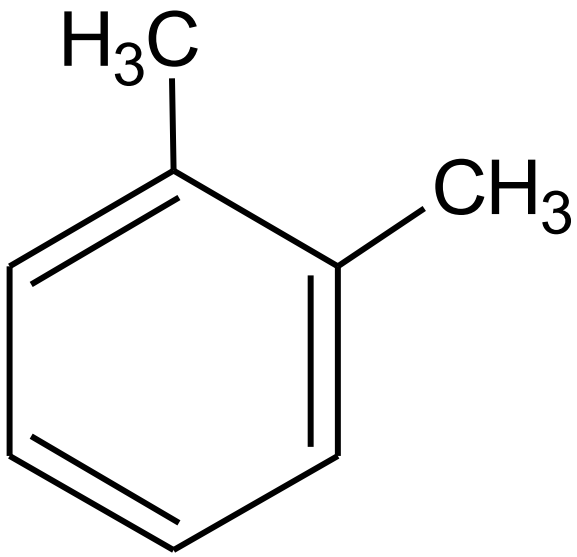
Câu (d)

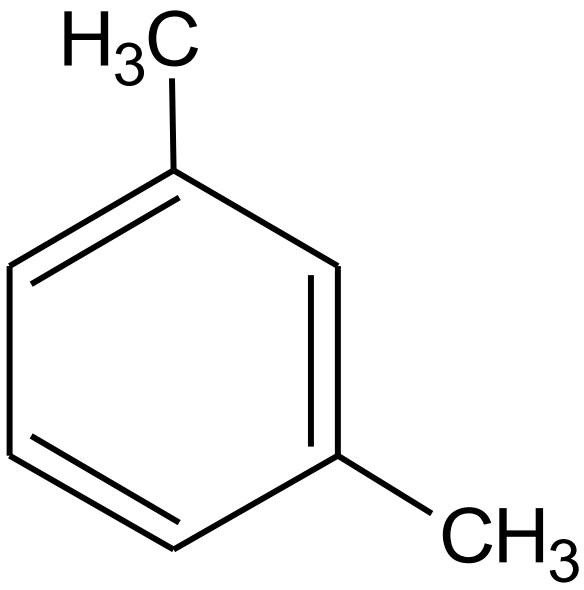
77. Cho pư: P-Xilen $\xrightarrow[[O]]{KMnO_4/H^+}$ A ?

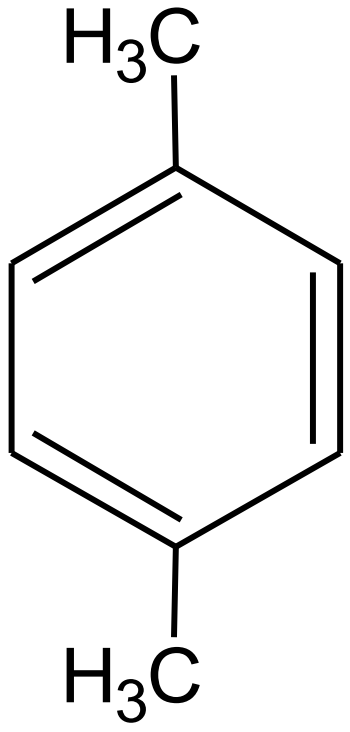


d. Axit terephtalic

78. Oxy hóa chất nào trong 3 chất: o-, p-,m-xilen thu dược acid terephtalic?

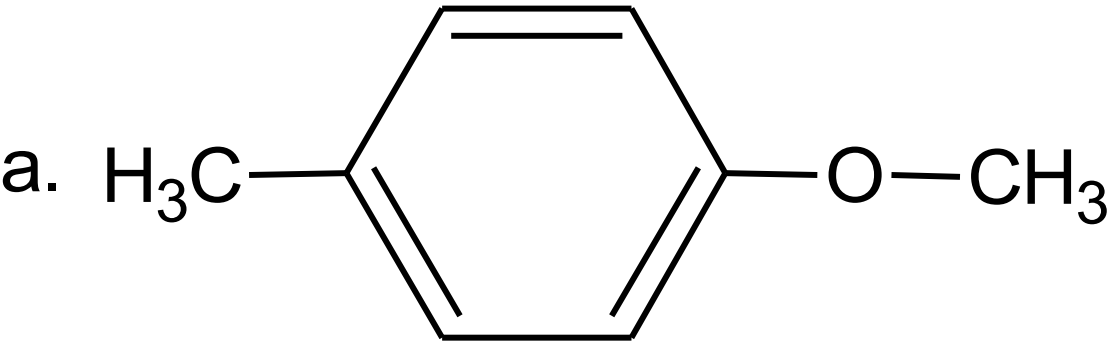


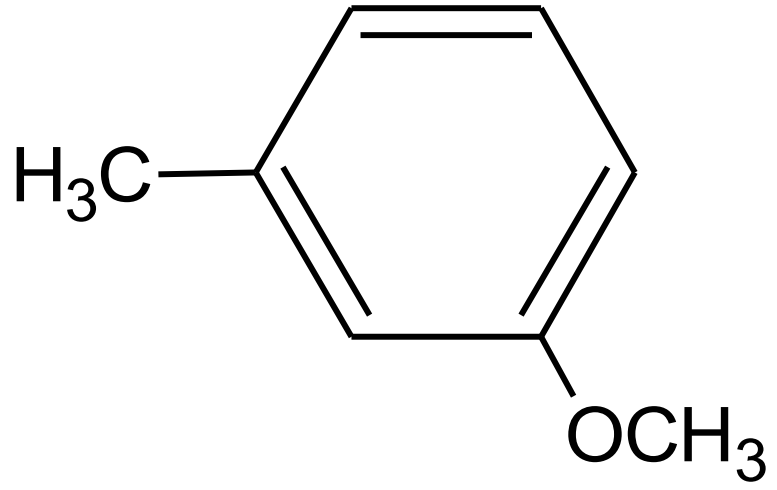


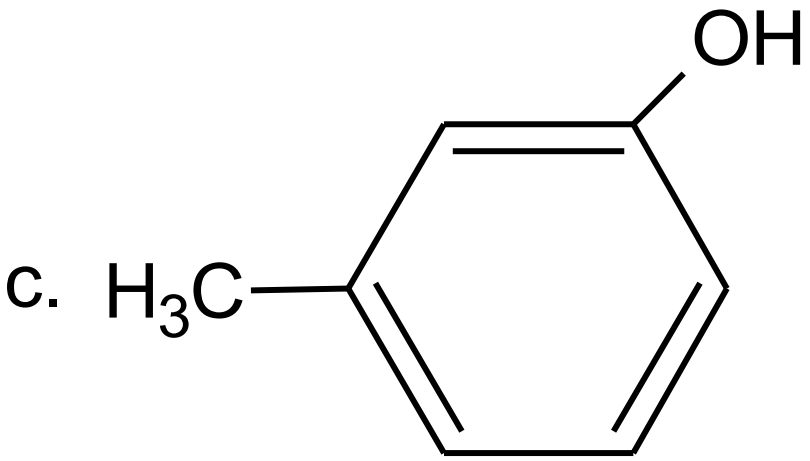


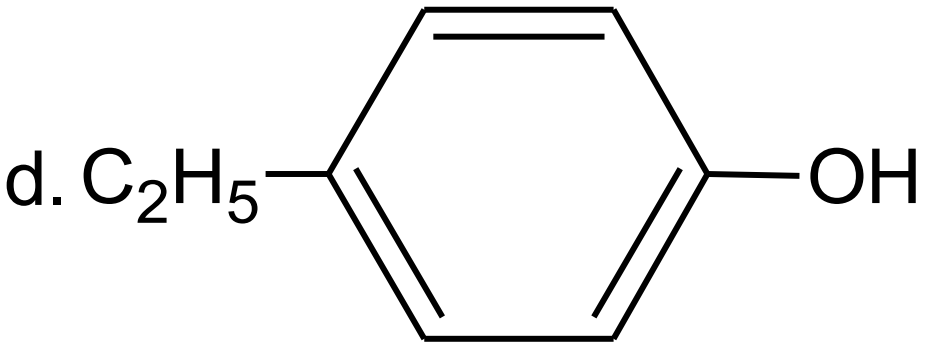
c. p-xilen

79. Oxy hóa A($C_8H_{10}O$) bằng $KMnO_4$ đun nóng thu được acid p-hidroxibenzoic, A là;

a. 

b. 

c. 

d. 

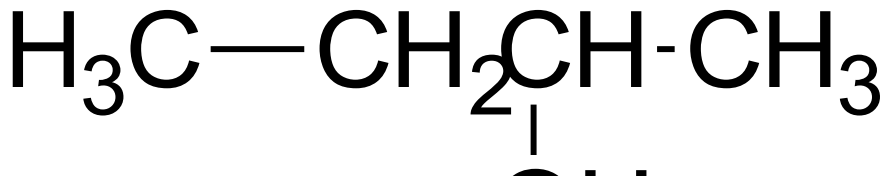
Câu (d)

CHƯƠNG III: ANCOL và PHENOL

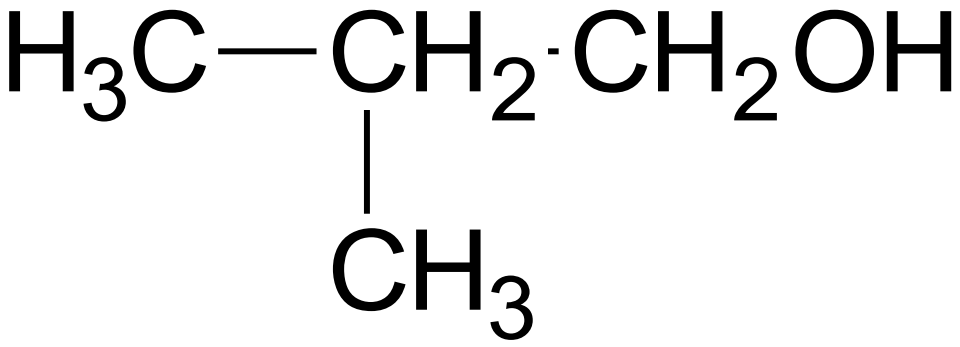
1. Tên gọi: CH_3-CH_2-CH_2-CH_2-OH, $CH_3CH_2CHOHCH_3$, $(CH_3)_2CHCH_2OH$, $(CH_3)_3COH$.

CH_3-CH_2-CH_2CH_2-OH

Butanol-1

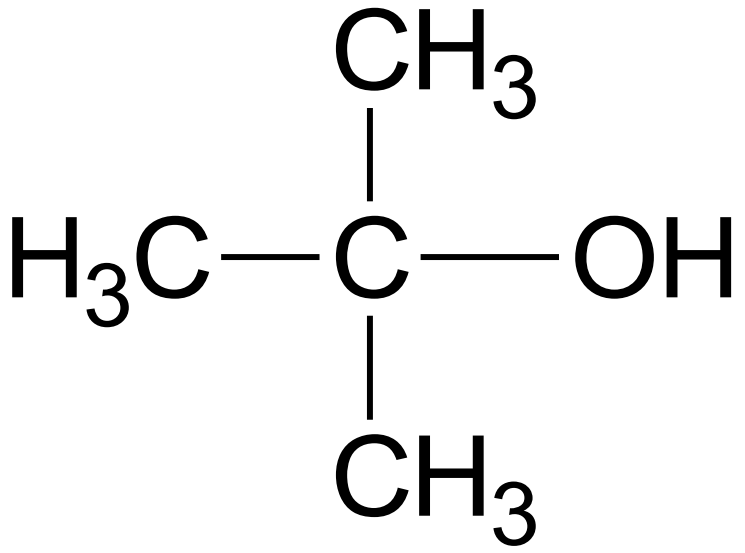


Butanol-2



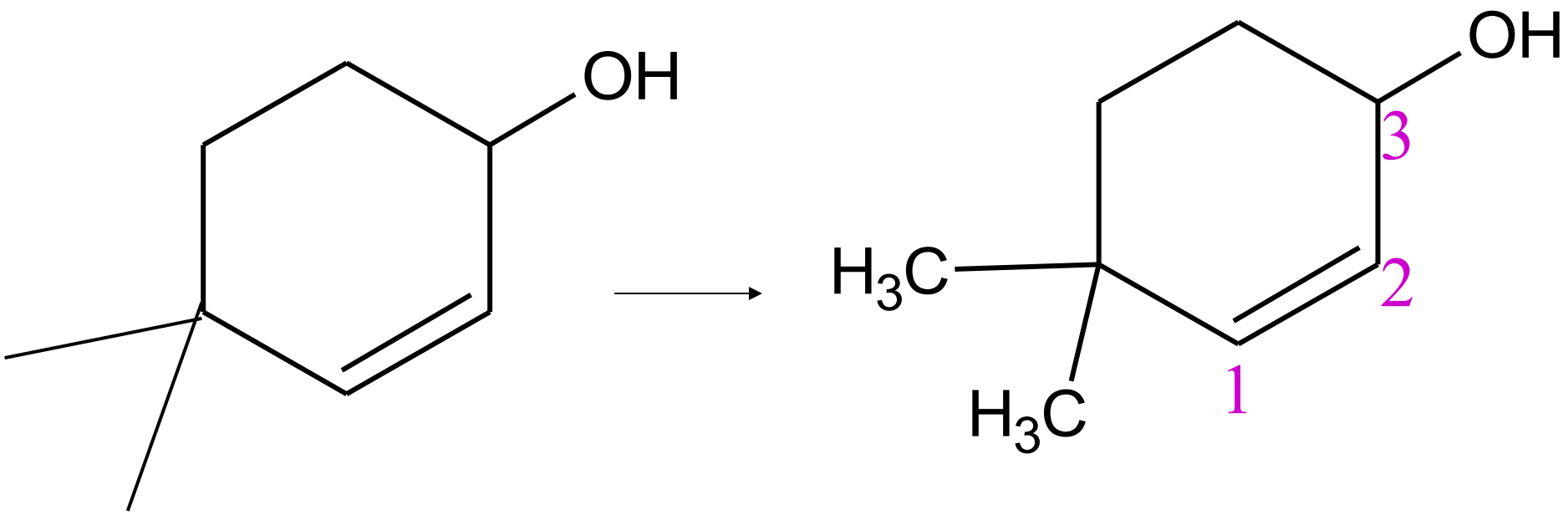
2-Metylpropanol-1

(b)



2-Metylpropanol-2

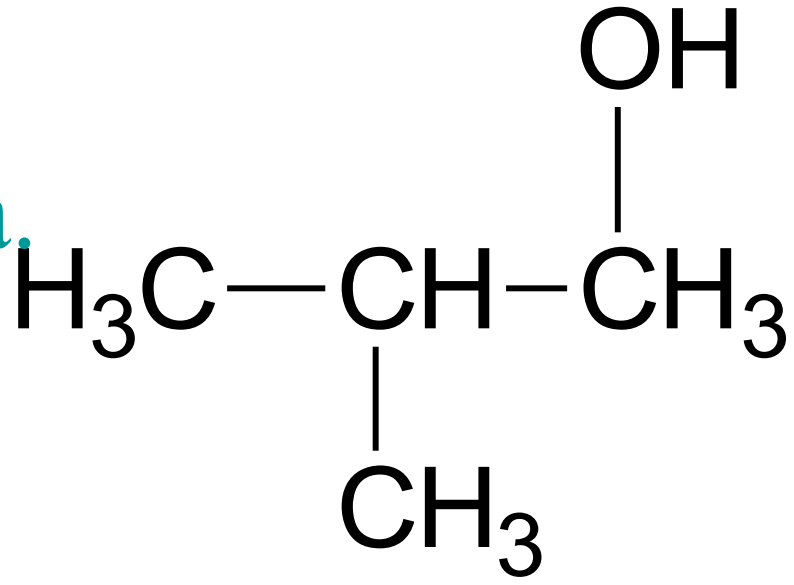
2. Tên gọi:

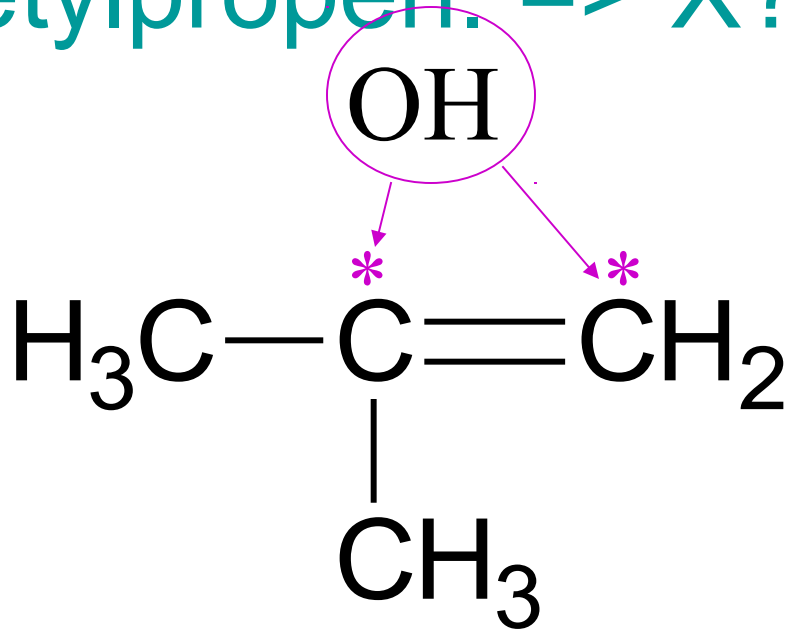


(c) 6,6-Dimetyl-1-ciclohexen-3-ol

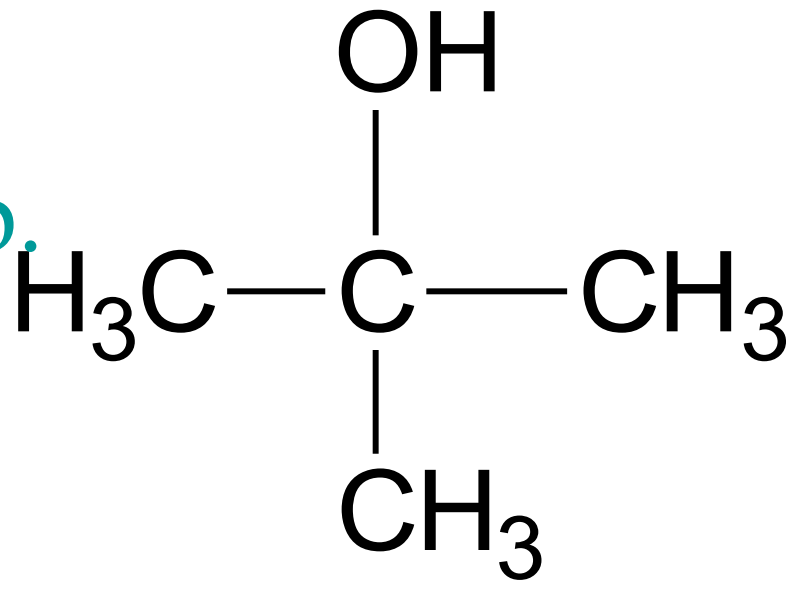
3. X (khử nước)→ 2-Metylpropen. => X?

a.





b.

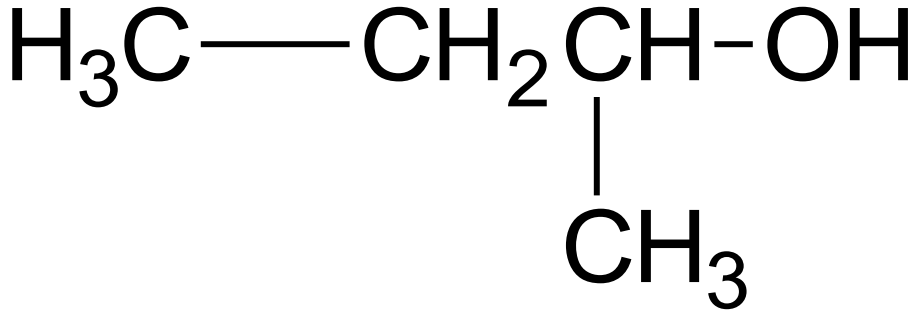


(c) 2-Metylpropanol-1

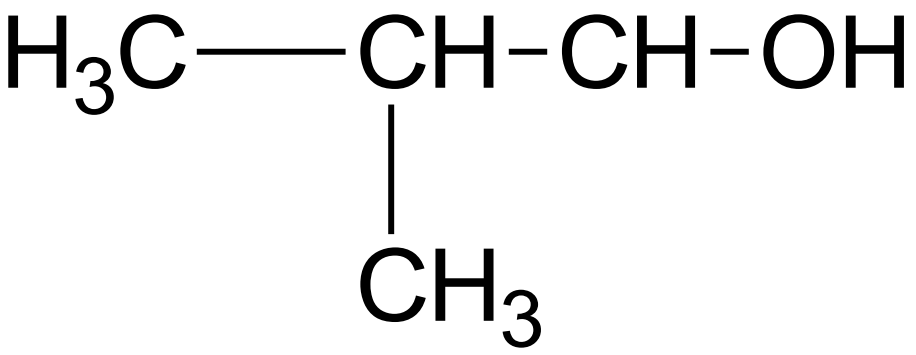
2-Metylpropanol-2

4. Bậc của: n-butylic, s-butylic, i-butylic, và t-butylic lần lượt là:

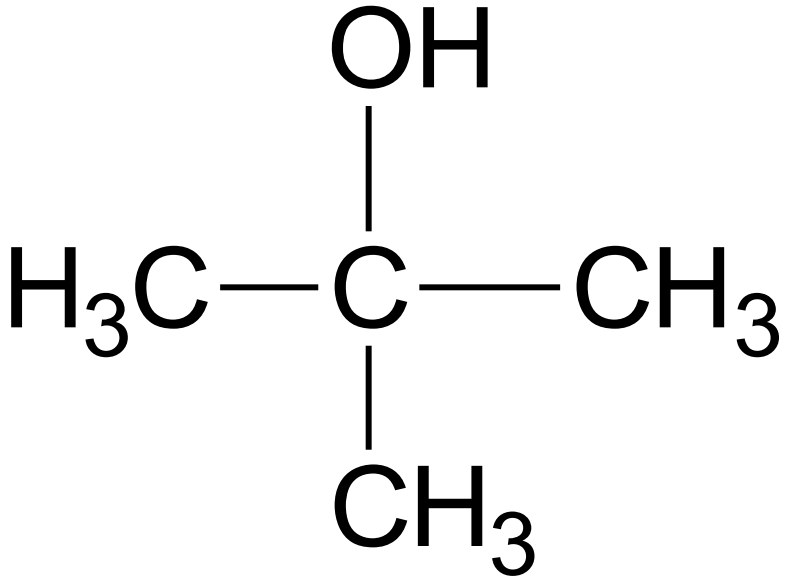
(bậc 1)



(bậc 2)



(bậc 1)

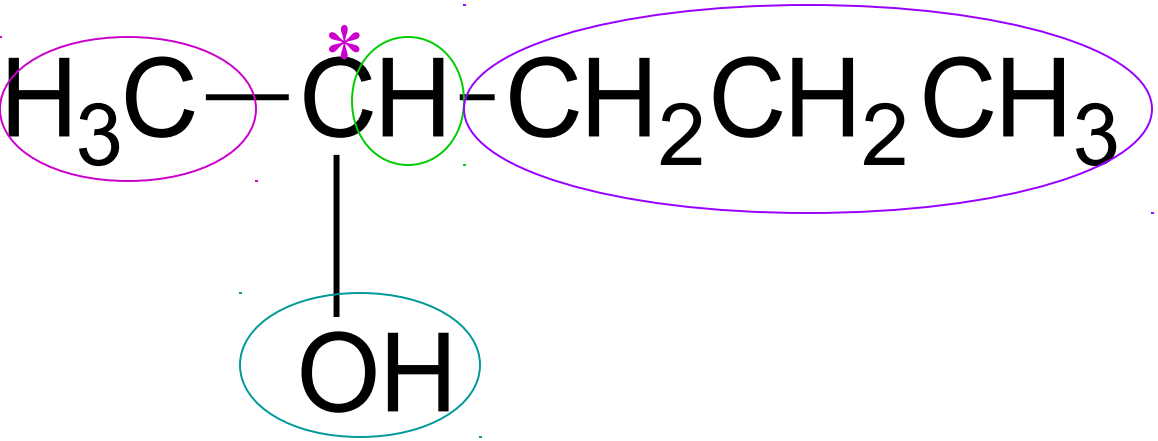


(bậc 3)

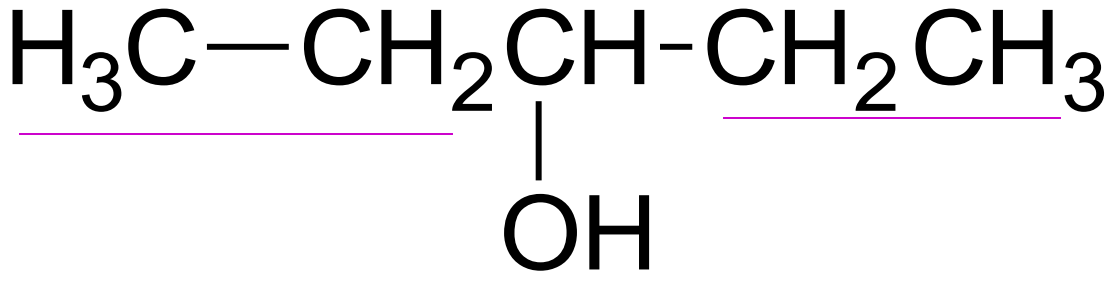
Câu c

5. 2 rượu:penyanol-2(I) và pentanol-3(II)

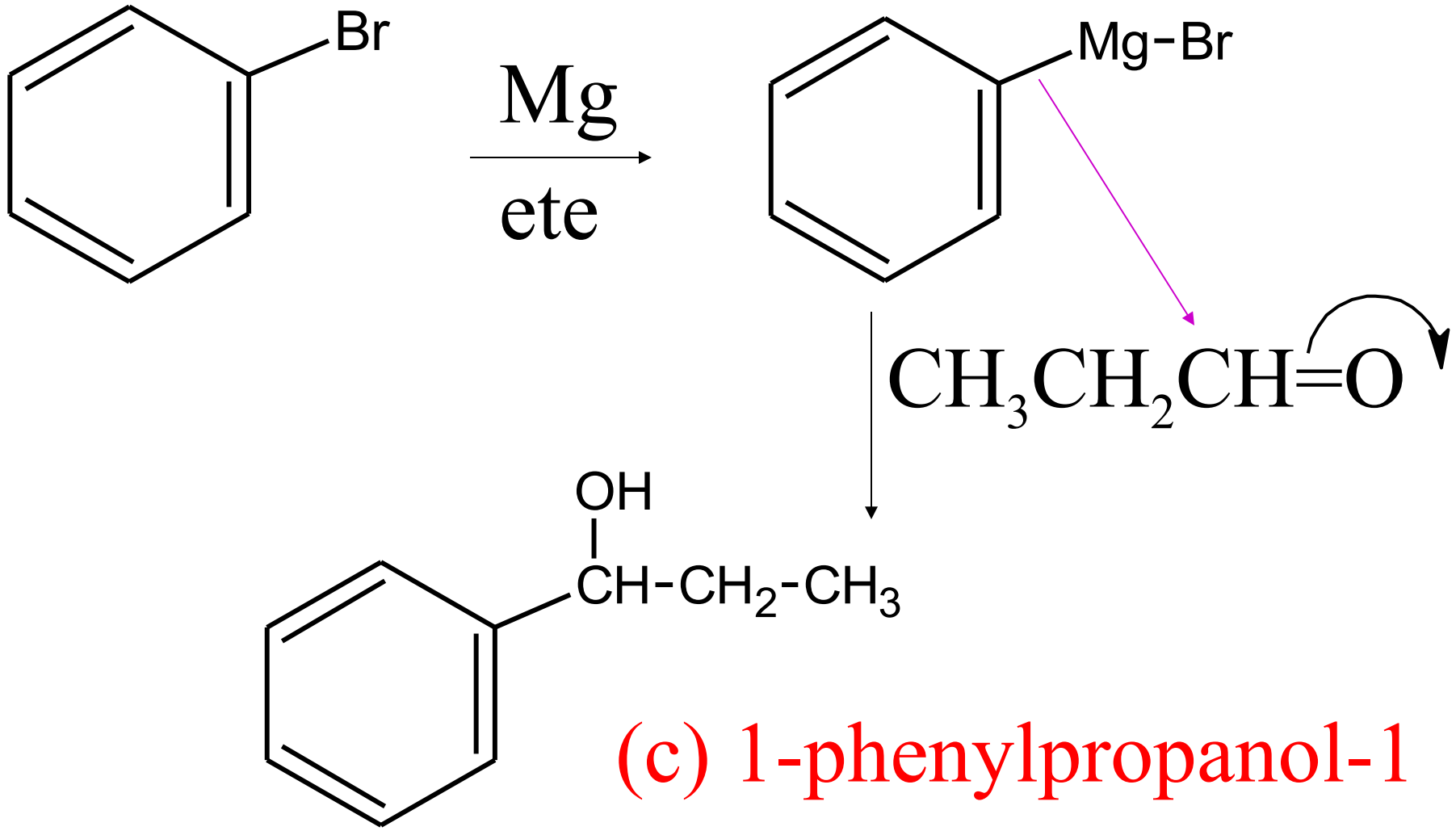
Rượu nào có đồng phân quang học?



(b). I



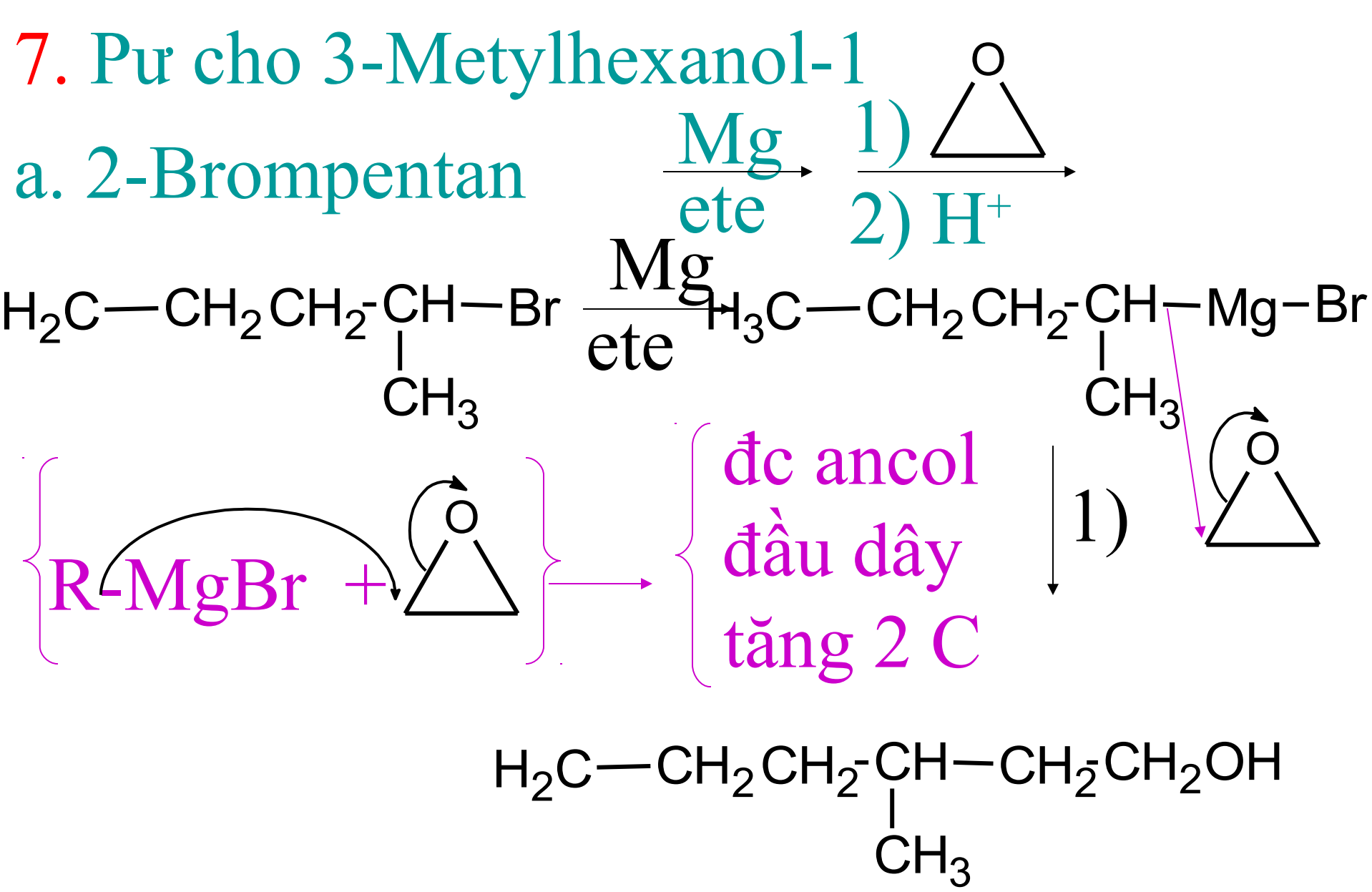
6. Brombenzen pư với Mg trong ete khan cho ra A. Sp của pư giữa A và propanal là:



(c) 1-phenylpropanol-1

7. Pư cho 3-Metylhexanol-1

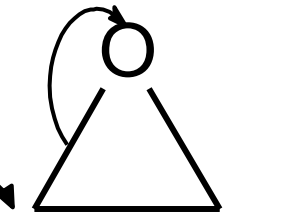
a. 2-Brompentan



3-Metylhexanol-1

Câu a

8. Pư nào cho Butanol-2?

a. CH_3CH_2-MgBr  $\xrightarrow{H_3O^+}$

$CH_3CH_2CH_2CH_2$-OH

Butanol-1

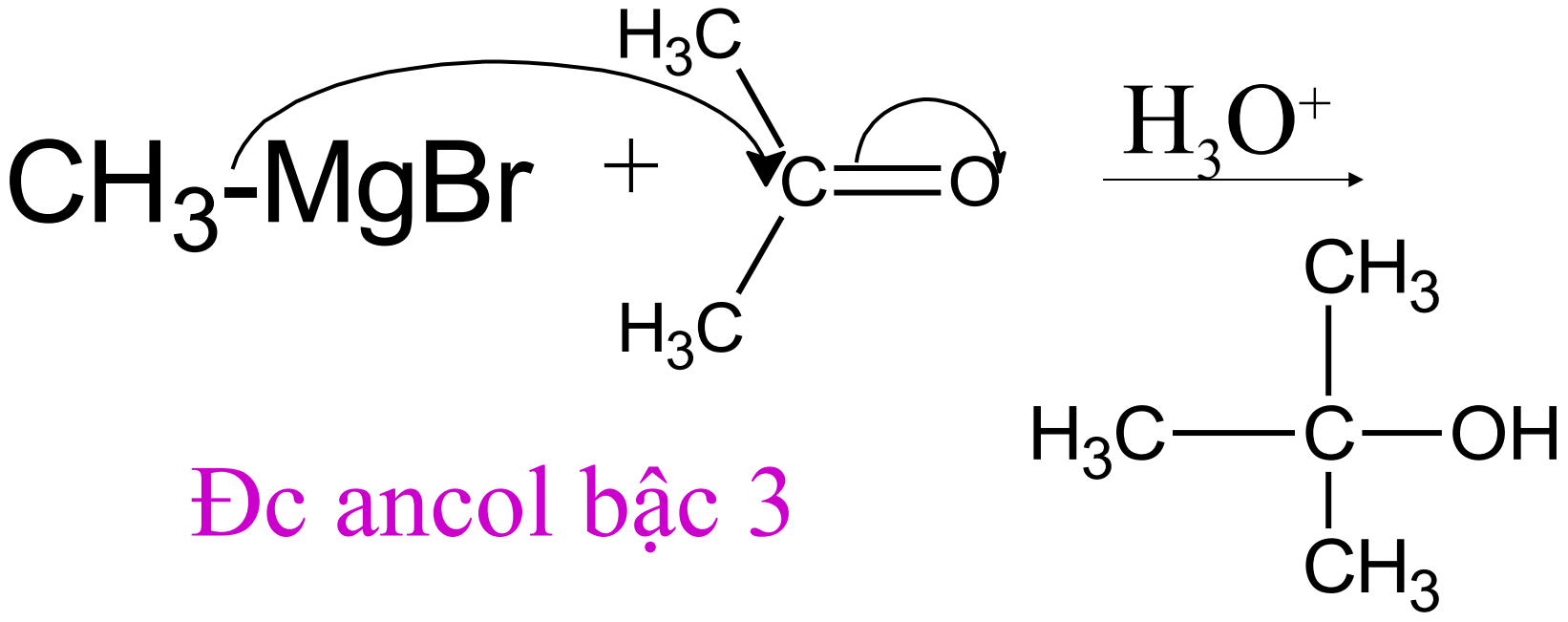
b. $CH_3CH_2CH_2$-MgBr $\xrightarrow{CO_2}$ $\xrightarrow{H_3O^+}$

R-MgBr $\xrightarrow{O=C=O}$ R-COOH

$CH_3CH_2CH_2$-COOH

A butanoic

c.



Đc ancol bậc 3

Ancol t-butylic

d. CH_3CH_2-MgBr + CH_3-CH=O $\xrightarrow{H_3O^+}$ CH_3CH_2-CH-CH_3 (OH)

Câu (d)

Butanol-2

9. Rượu nào dưới đây không thể điều chế từ sự khử andehit/xeton với H_2/Ni

a. 1-butanol $CH_3CH_2CH_2CH_2$-OH

b. 2-butanol CH_3CH_2CHOH -CH_3

c. 2-Metylpropanol-1 CH_3-CH-CH_2-OH

CH_3

d. 2-Metylpropanol-2

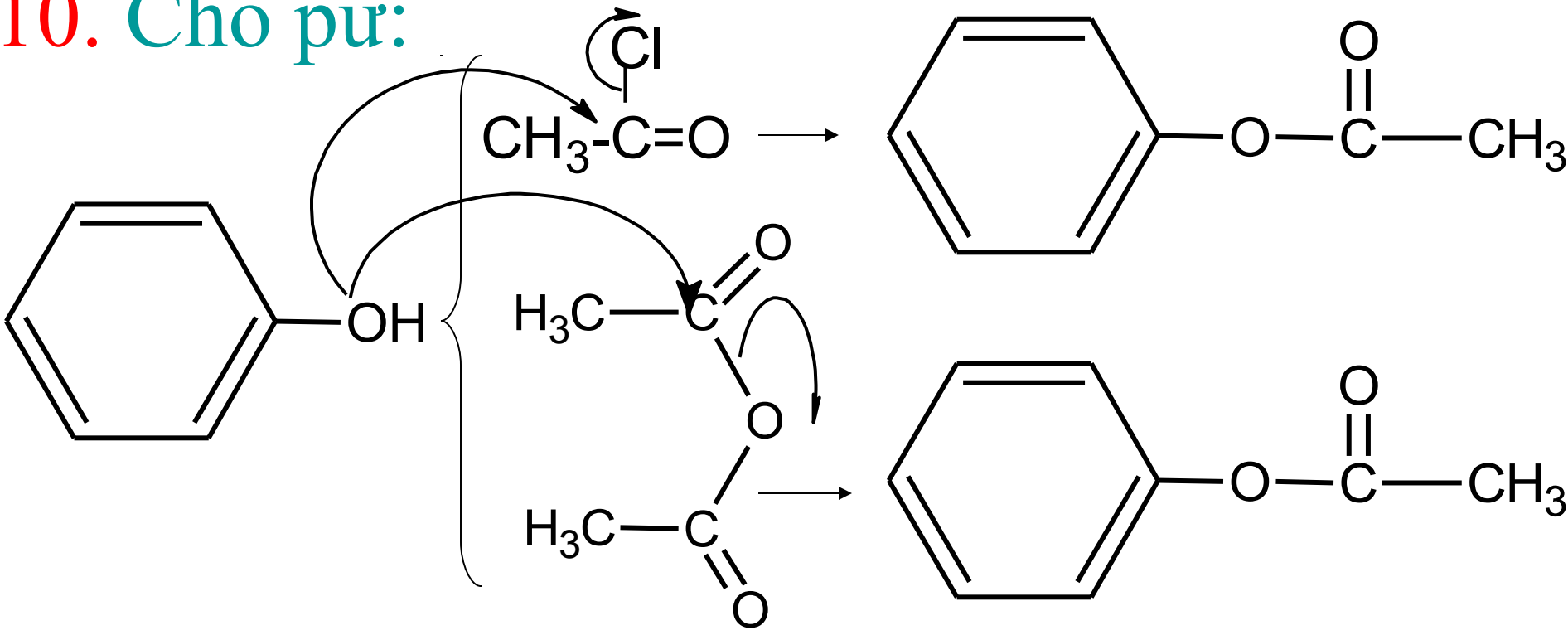
OH

CH_3-C-CH_3

CH_3

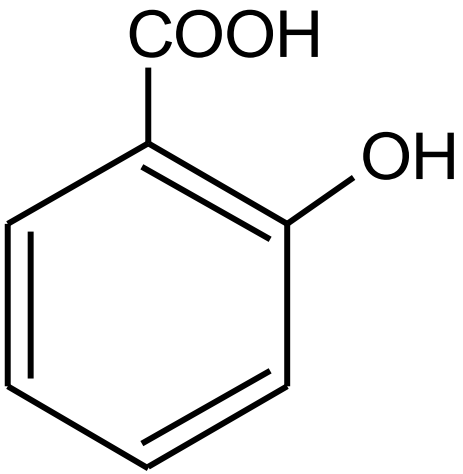
Câu d

10. Cho pư:

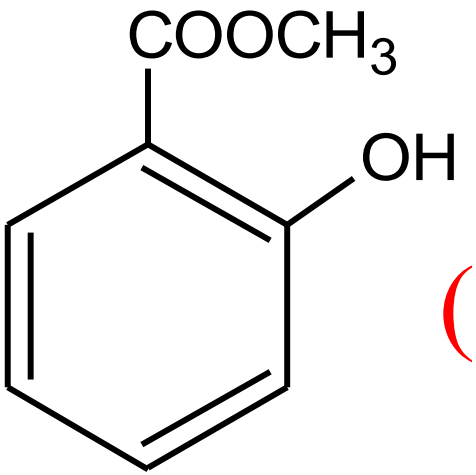


c. Đều là $C_6H_6OCOCH_3$

11. Cho pư:



$\xrightarrow[H_2SO_4đđ]{CH_3OH}$ A?



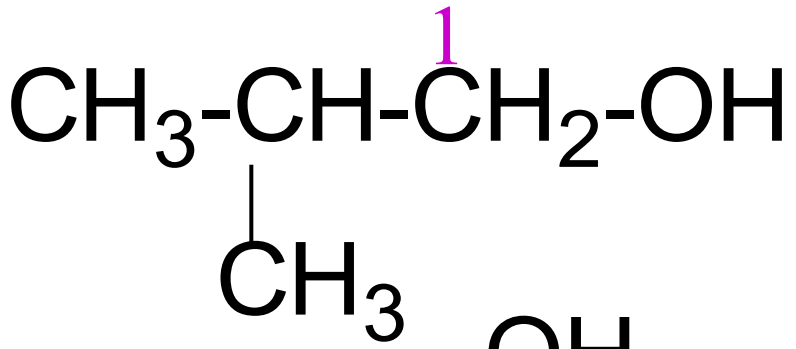
(a)

12. Khả năng khử H_2O(xt H_2SO_4) ↑?

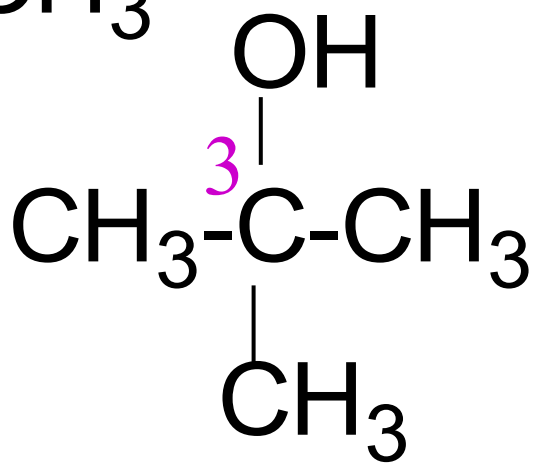
Butanol-1(1) $CH_3CH_2CH_2\overset{1}{C}H_2\text{-}OH$

Butanol-2(2) $CH_3CH_2\underset{2}{C}HOH\text{-}CH_3$

2-Metylpropanol-1(3)

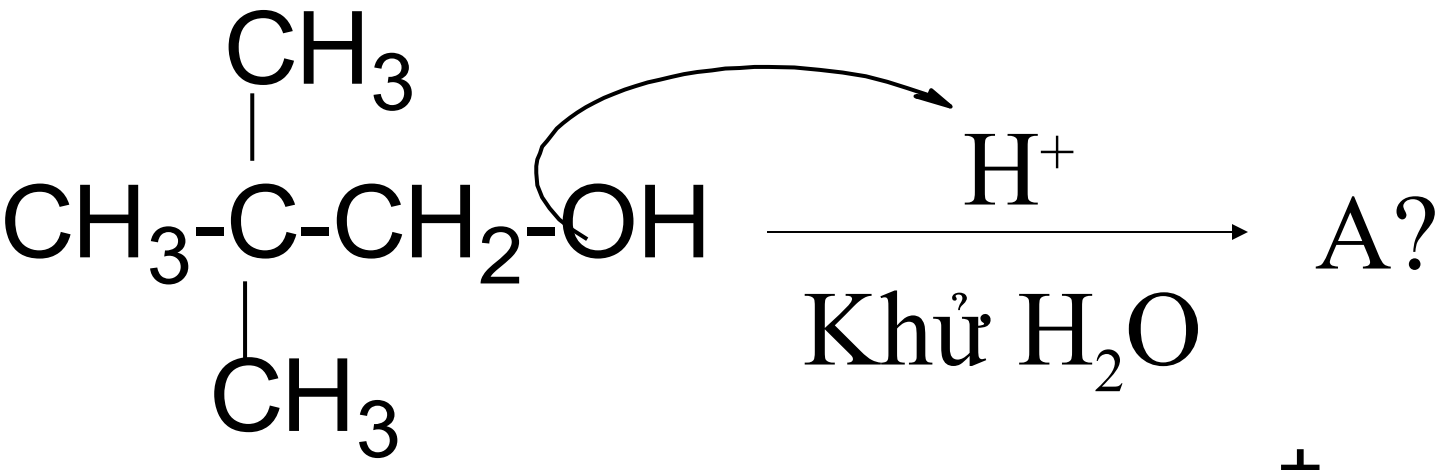


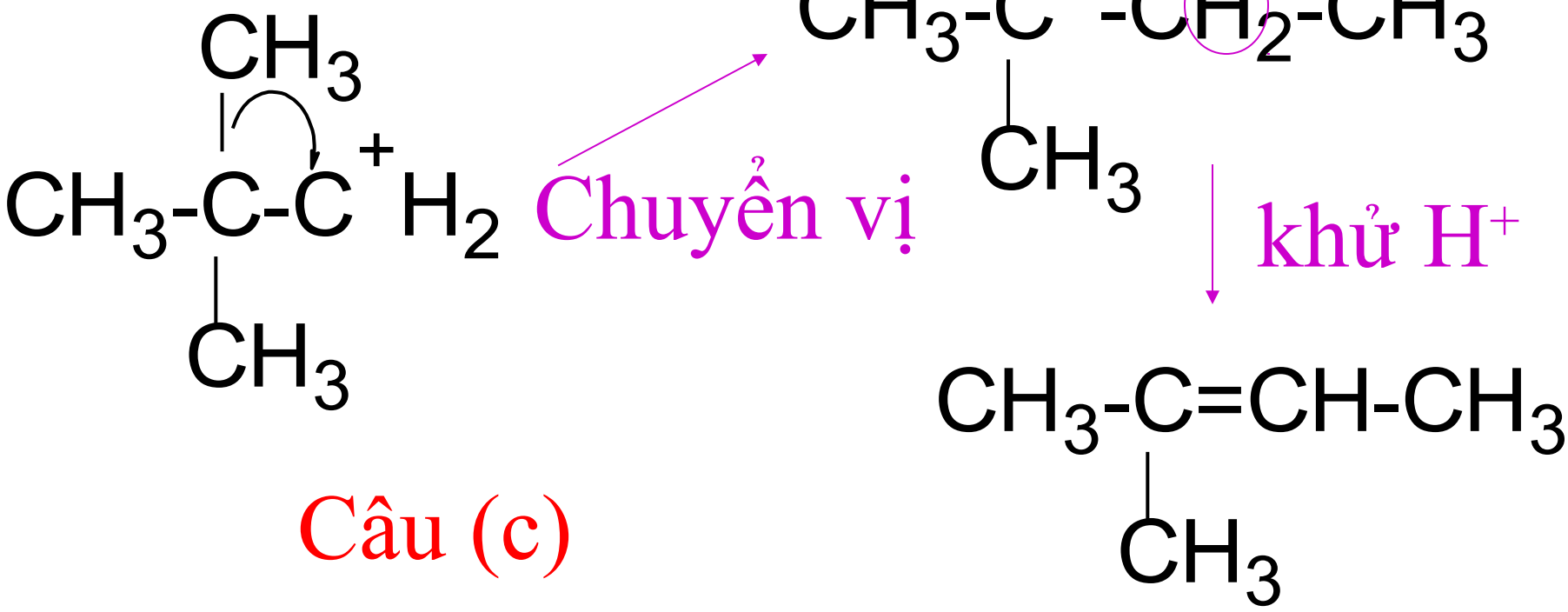
2-Metylpropanol-2(4)



(c) (1) < (3) < (2) < (4)

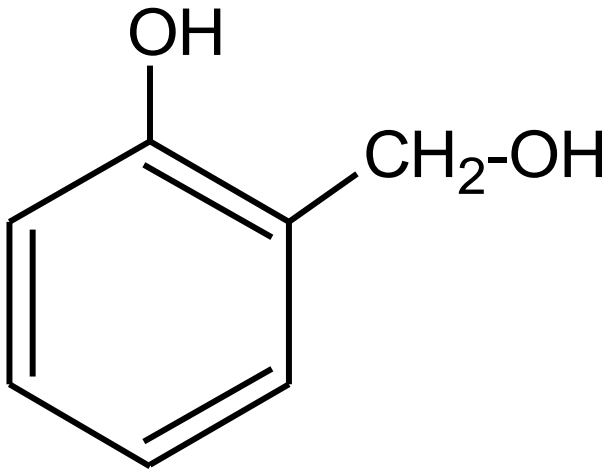
13. Cho pư:





Câu (c)

14. Sp của pư:

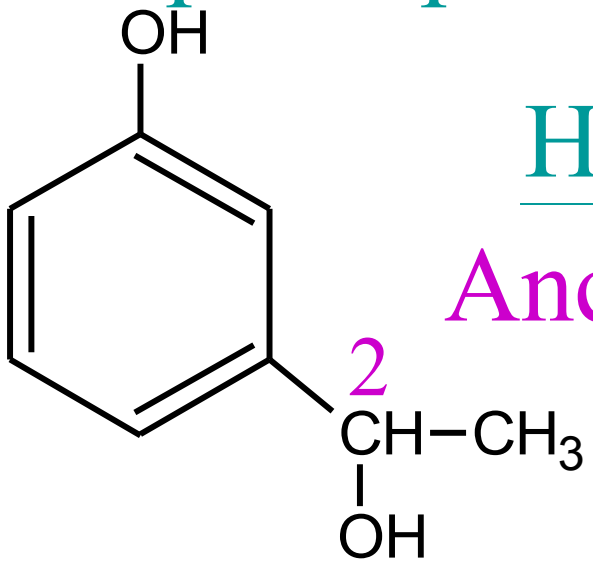


$HCl/ZnCl_2$ →

Ancol bậc 1 và phenol không pư

Câu (d)

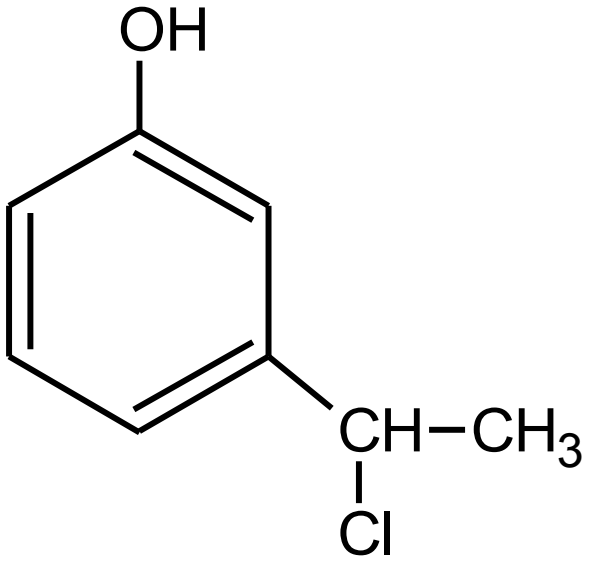
15. Sp của pư:



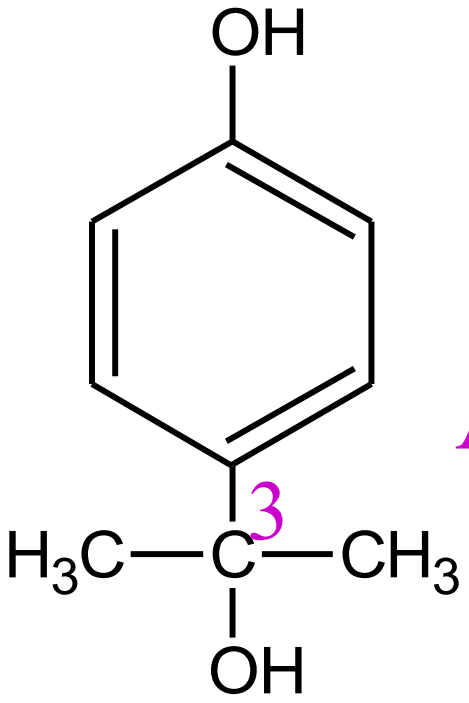
$HCl/ZnCl_2$ →

Ancol bậc 2: pư

Câu (b)

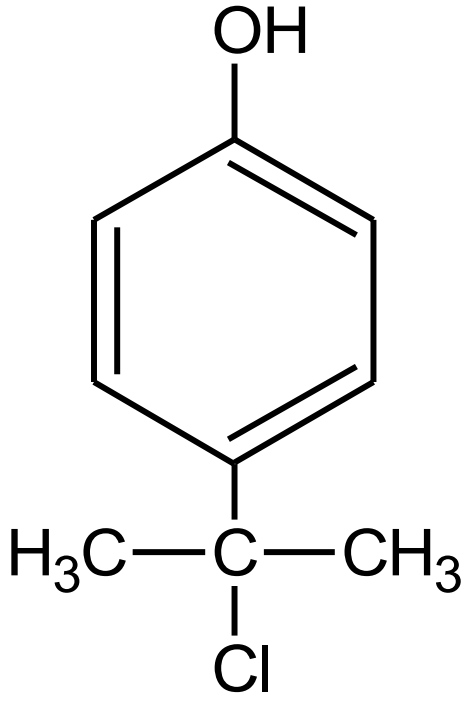


16. Sp của pư:



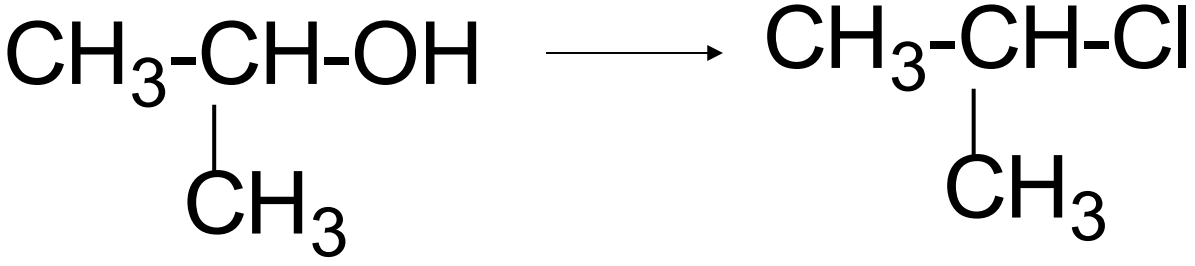
$HCl/ZnCl_2$

Ancol bậc 3: pư



17. Tác chất?

Câu (b)

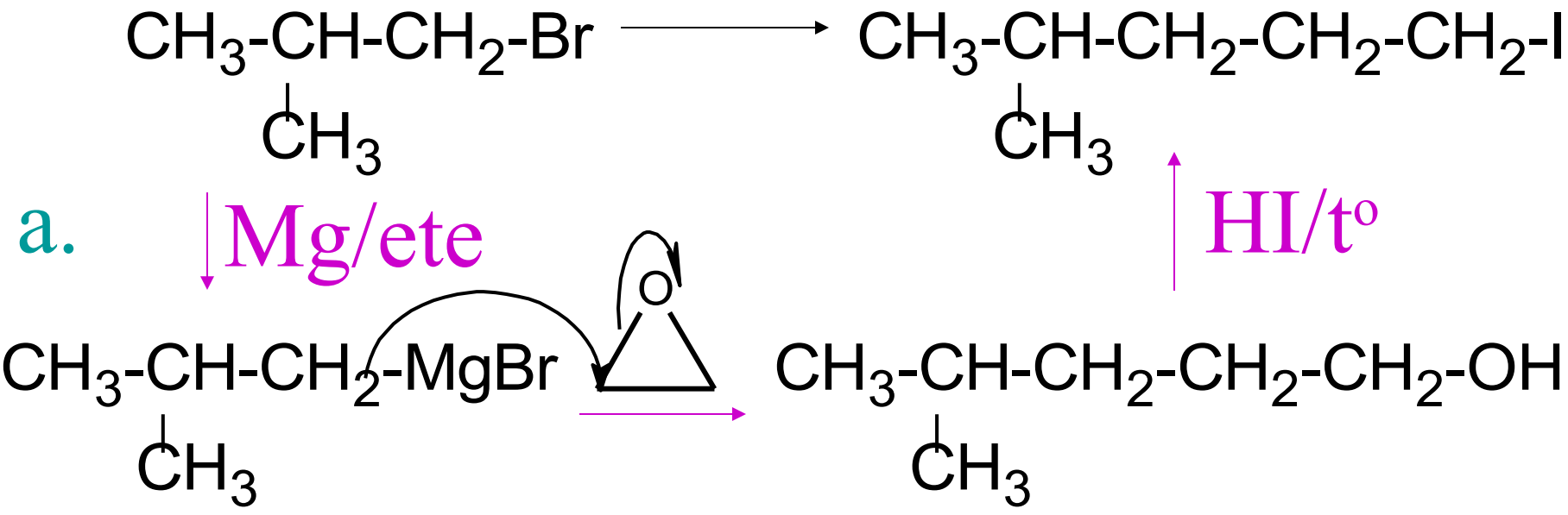


(b). $SOCl_2$

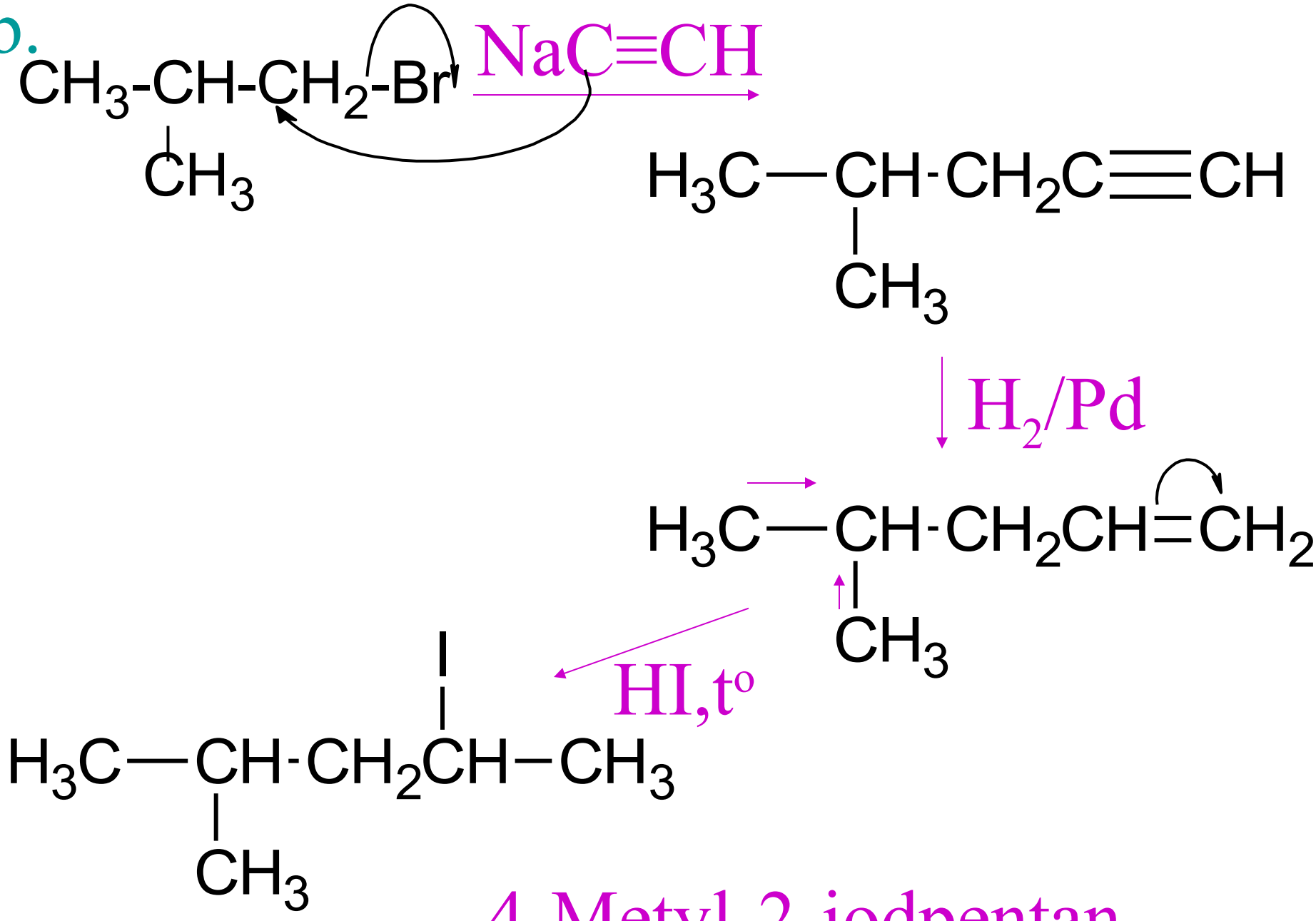
18. Sp chính?

Câu (b)

19. 2-Metyl-1-brompropan → 4-metyl-1-iodpentan ?

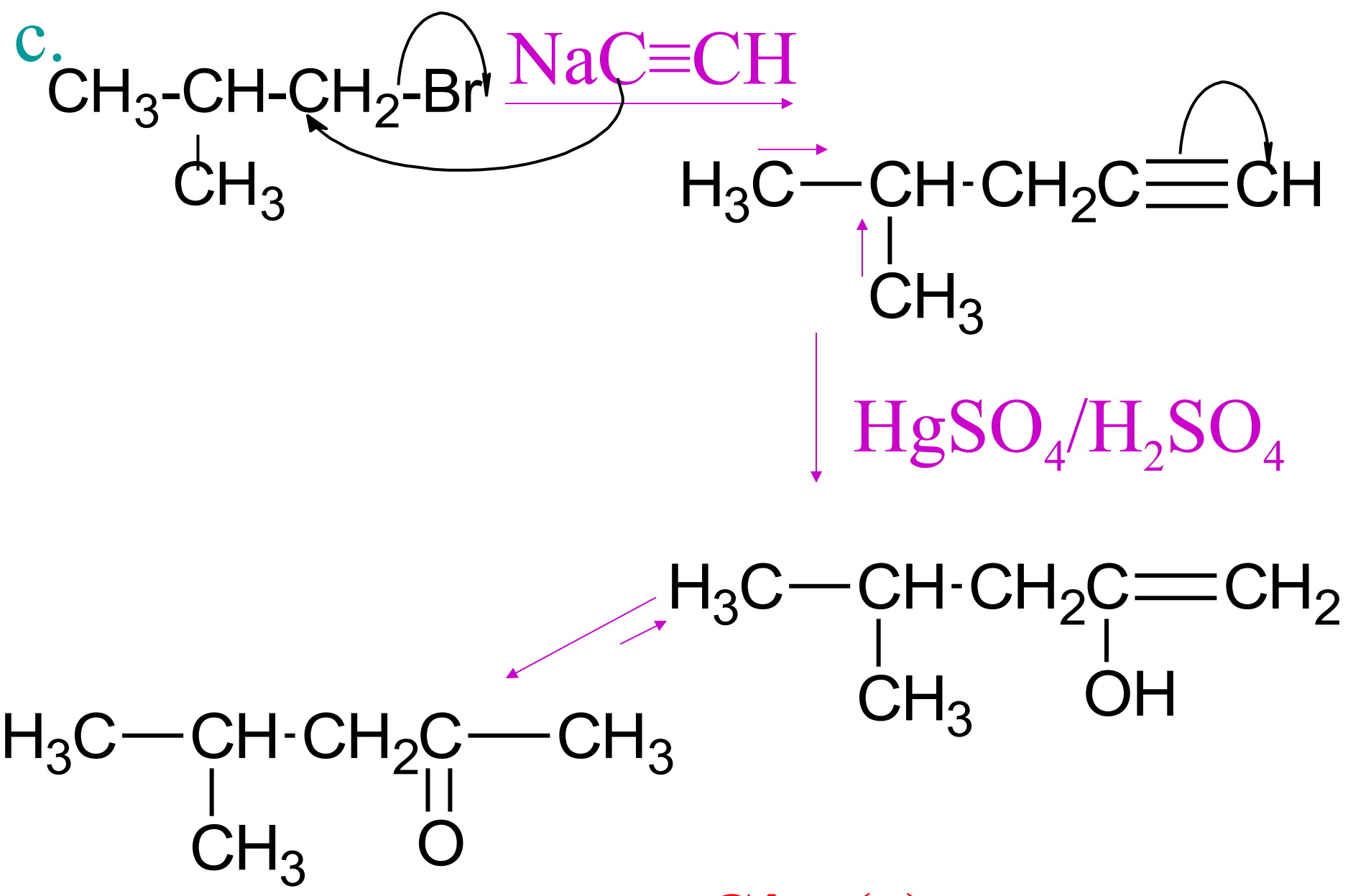


b.



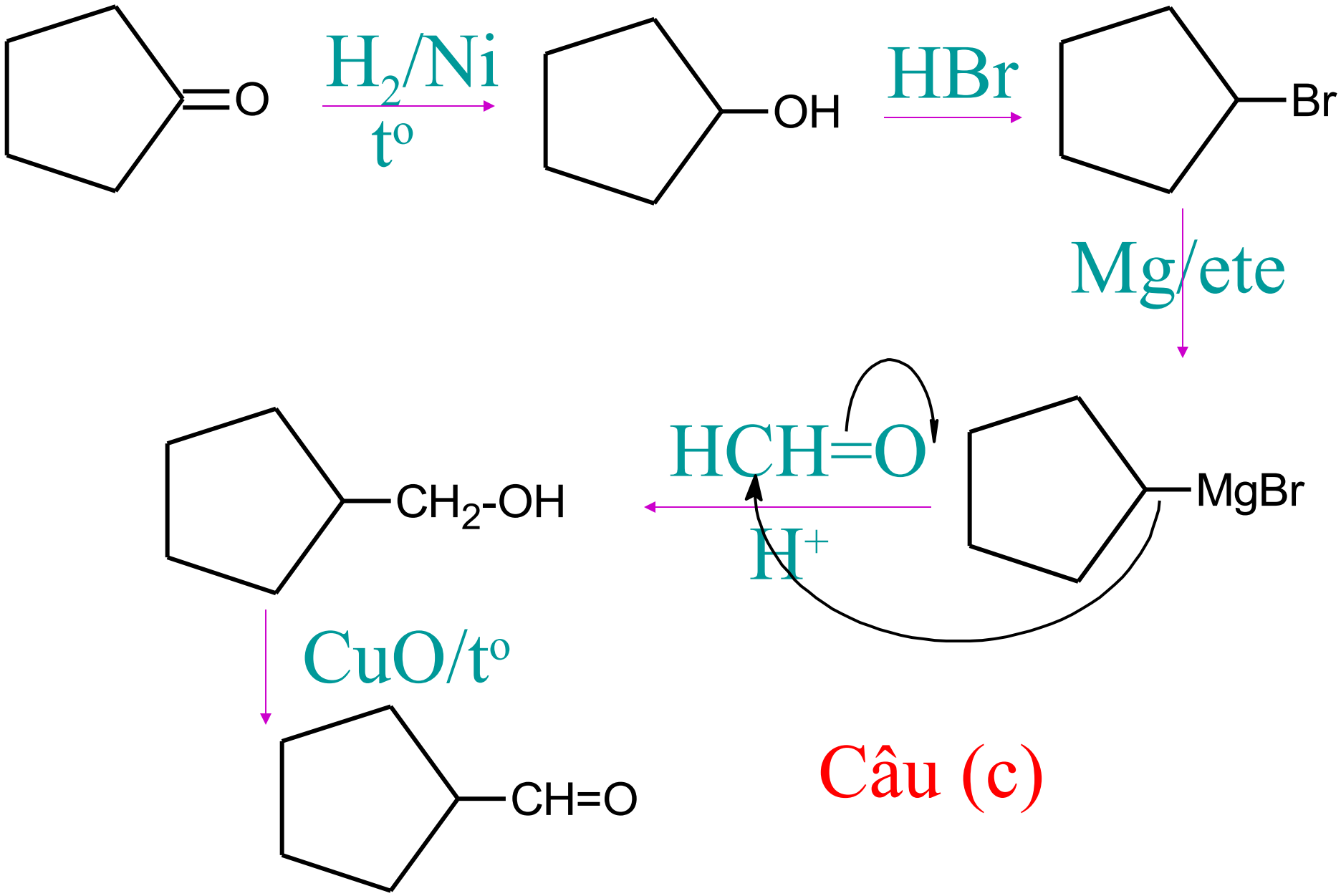
4-Metyl-2-iodpentan

c.


CH3-CH-CH2-Br
CH3
NaC≡CH
H3C—CH·CH2C≡CH
CH3
HgSO4/H2SO4
H3C—CH·CH2C═CH2
CH3
OH
H3C—CH·CH2C—CH3
CH3
O

Câu (a)

20. Sp ?



Câu (c)

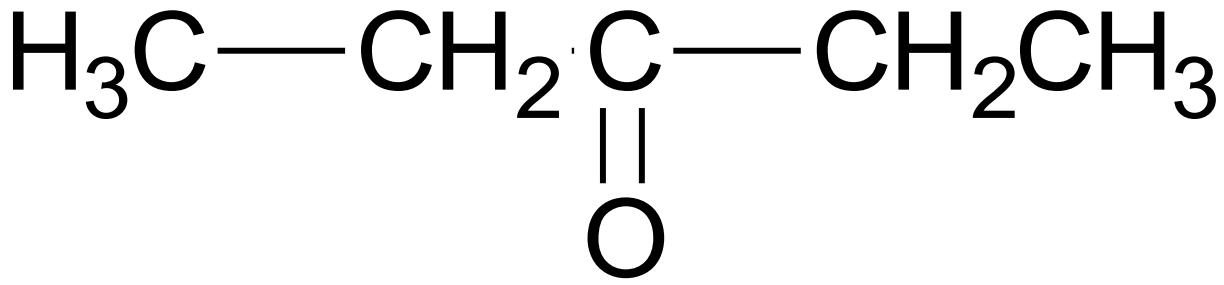
21. $A(C_5H_{10}O)^{*}? \xrightarrow{H_2/Ni} B(C_5H_{12}O) \xrightarrow{CuO/t^o}$

$C(C_5H_{10}O)$ B và C không có tính triền quang

a. 1-Penten-3-ol

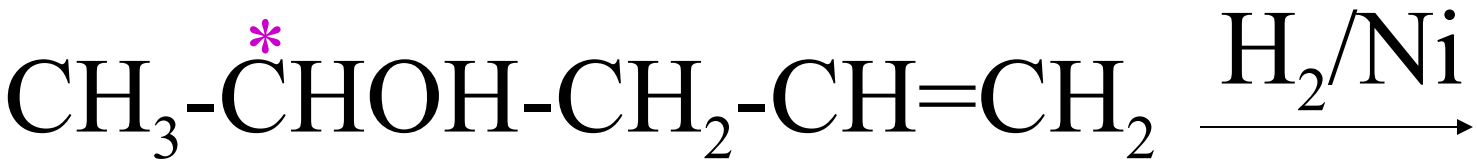
$CH_2{=}CH\text{-}\overset{*}{C}HOH\text{-}CH_2\text{-}CH_3 \xrightarrow{H_2/Ni}$

$CH_2\text{-}CH_2\text{-}CHOH\text{-}CH_2\text{-}CH_3 \xrightarrow{CuO/t^o}$



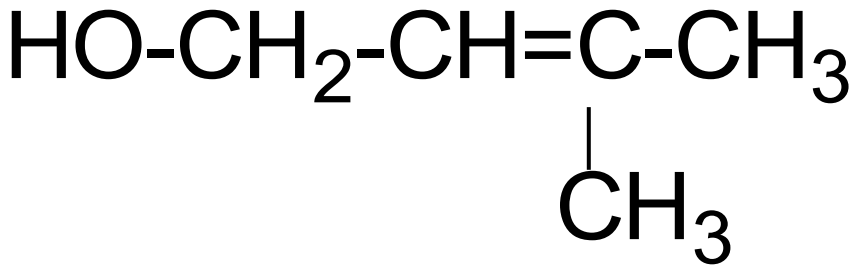
A có tính triền quang, B và C không có.

b. 4-Penten-2-ol



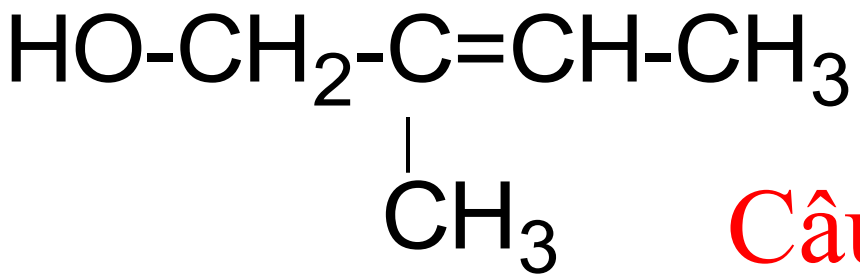
B có C*

c. 3-Metyl-2-buten-1-ol



Không có C*

d. 2-Metyl-2-buten-1-ol

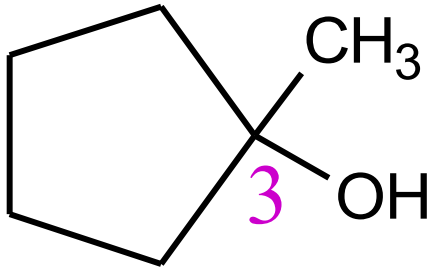


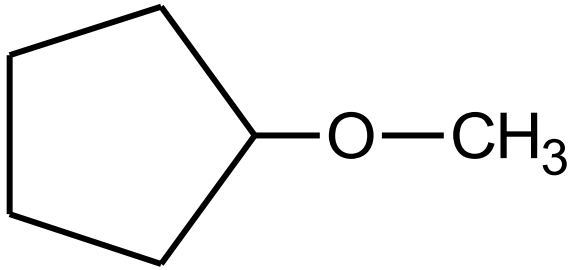
Không có C*

Câu (a)

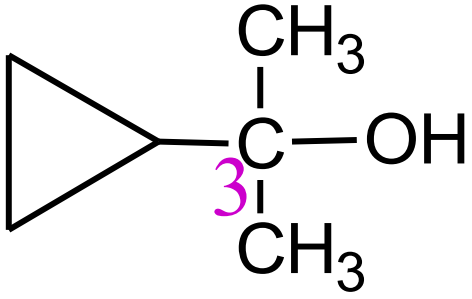
22.A($C_6H_{12}O$) + Br_2/CCl_4 không pư, nhưng pư với H_2CrO_4 . A là:

a.1-Metylxiclopentanol b.Metoxixiclopentan

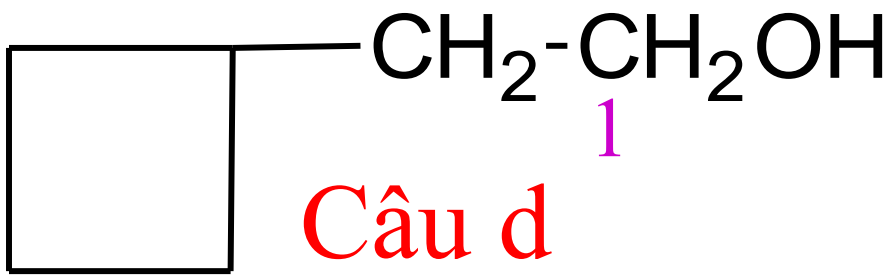




c. 2-xiclopropylpropanol-2



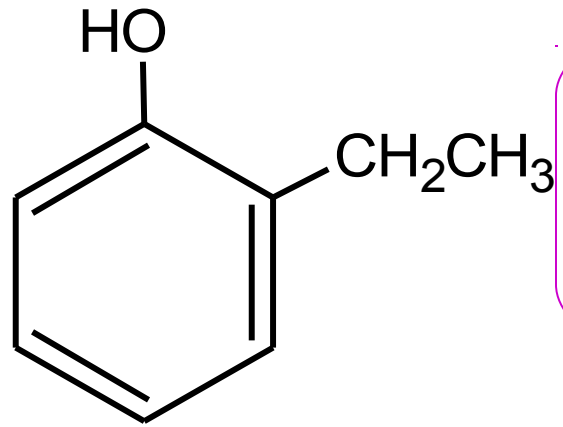
d. 2-xiclobutyletanol



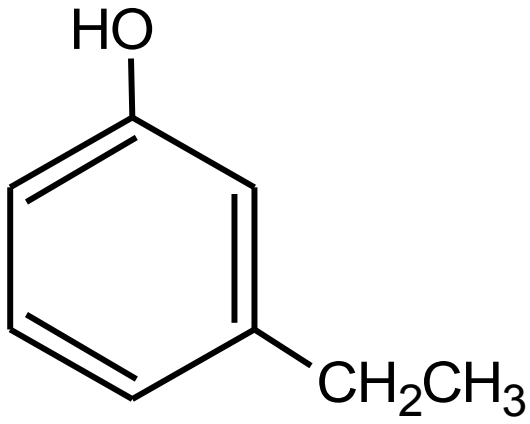
Câu d

Chỉ có ancol bậc 1 và 2 mới pư với H_2CrO_4

23. A($C_8H_{10}O$) là dẫn xuất của benzen. A tác dụng với Na và cho pư haloform. A ?

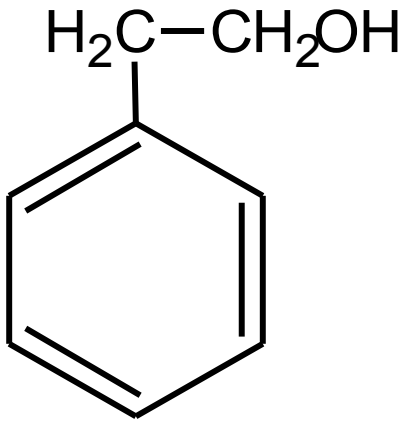
a. 

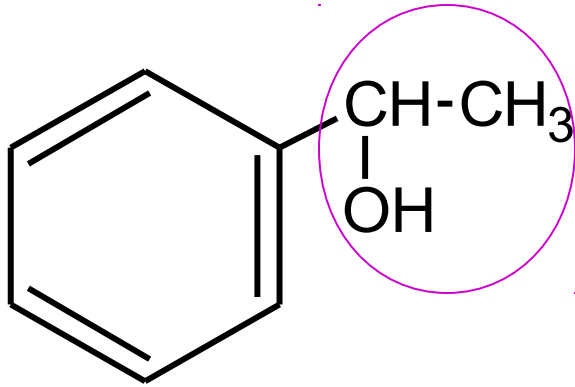
Pư với Na=> -OH

b. 

Cho pư haloform =>

CH_3-CH-
OH

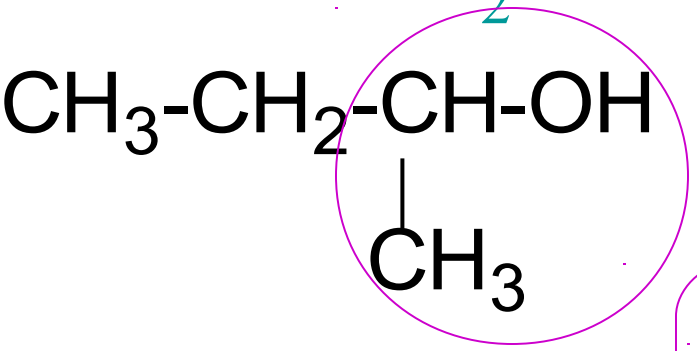
c. 

d. 

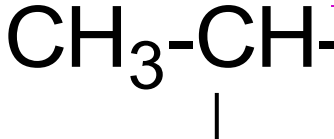
Câu (d)

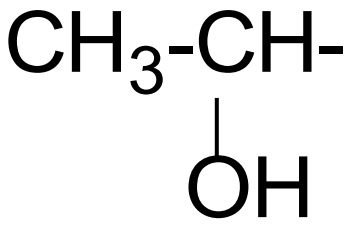
24. Để phân biệt rượu s-butylic và i-butylic có thể dùng

a. Na b. I_2/NaOH c. a,b đúng d. a,b sai



{ + Na: cả 2 đều pư

s-butylic có nhóm 
nên pư với I_2/NaOH

i-butylic không có nhóm 
nên không pư với I_2/NaOH }

Cau (b)

25. Để phân biệt rượu s-amylic và i-amylic có thể dùng:

a. Na

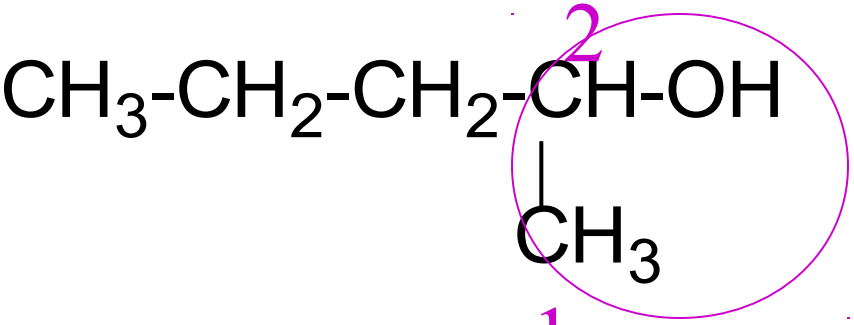
b. I_2/NaOH

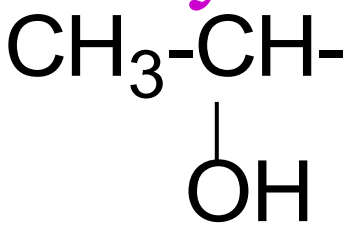
c. $ZnCl_2$/HCl

d. b,c được

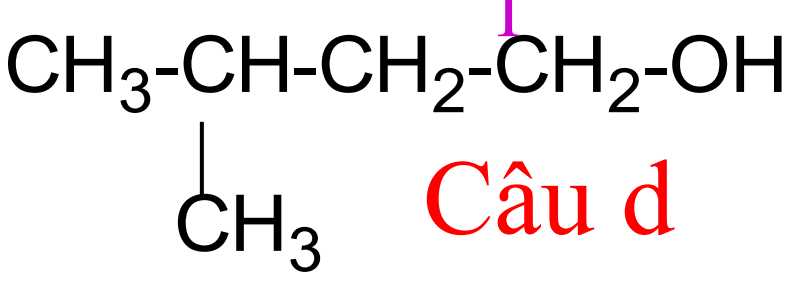
+Na: cả 2 đều pư

s-amylic có nhóm CH_3-CH- nên pư với I_2/NaOH





i-amylic không có nhóm CH_3-CH- nên không pư với I_2/NaOH

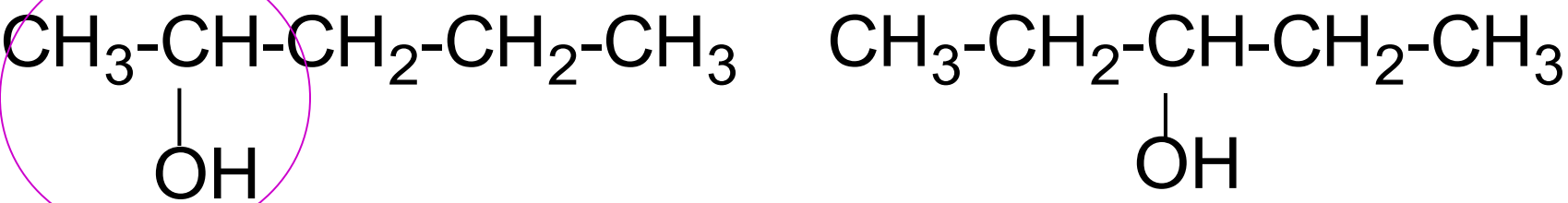


Câu d

s-amylic:bậc 2:pư được với $ZnCl_2$/HCl

i-amylic: bậc 1: không pư với $ZnCl_2$/HCl

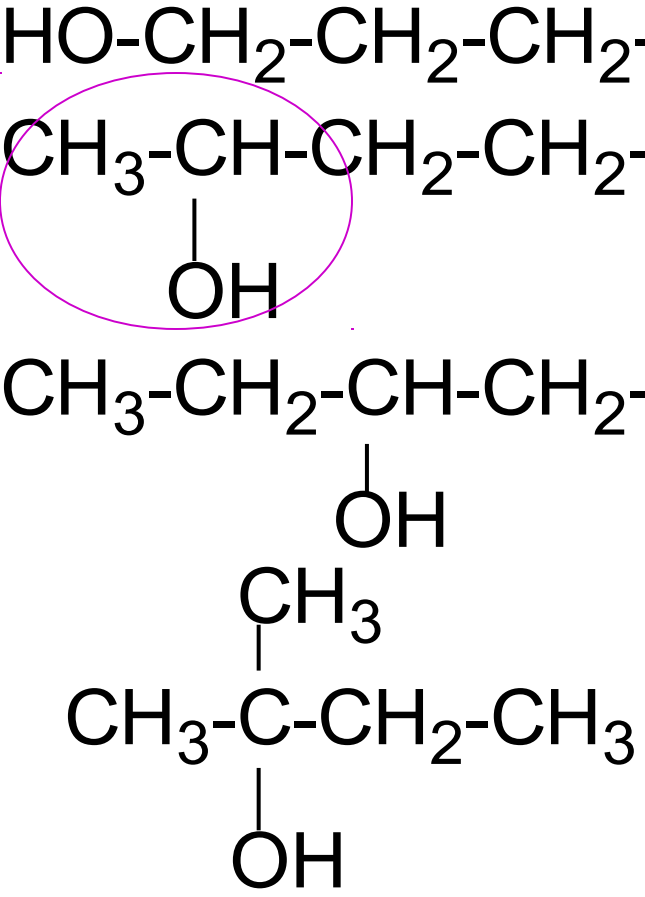
26. Phân biệt pentanol-2 và pentanol-3:



* Na: cả 2 đều pư
* CuO,t^o: cả 2 đều cho xeton
* I_2/NaOH: Chỉ có pentanol-2 pư

(c) (I_2/NaOH)

27. Phân biệt 4 chất lỏng: pentanol-1, pentanol-2, pentanol-3, 2-Metylbutanol-2:



* Na: cả 4 đều pư

*CuO,t°:(I) cho andehid, (II),(III) cho xeton, (IV) không pư. + $AgNO_3/NH_3$ chỉ andehid pư

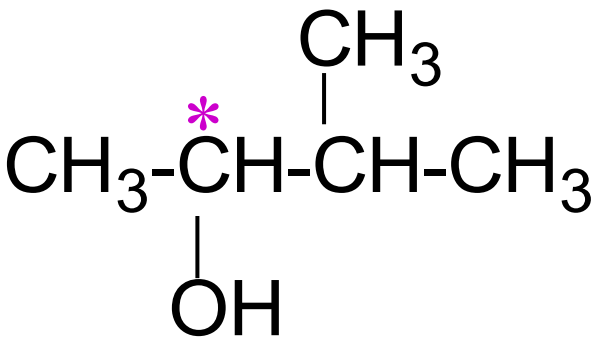
* Tt Lucas: (I) không pư, (II) (III) pư chậm, (IV) pư nhanh.

* $I_2/NaOH$: (II) pư

Câu (d)

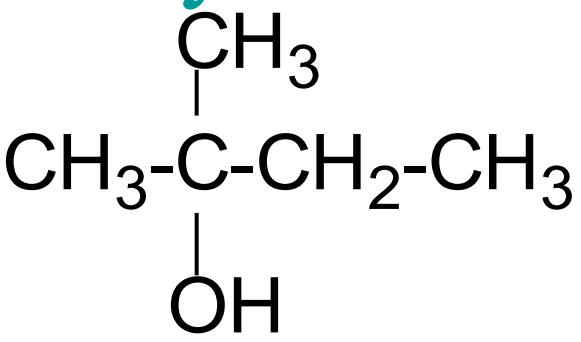
28. Rượu A($C_5H_{12}O$) không pư với tt Lucas ở t^o thường, có tính quang hoạt. A là:

a. 3-Metylbutanol-2



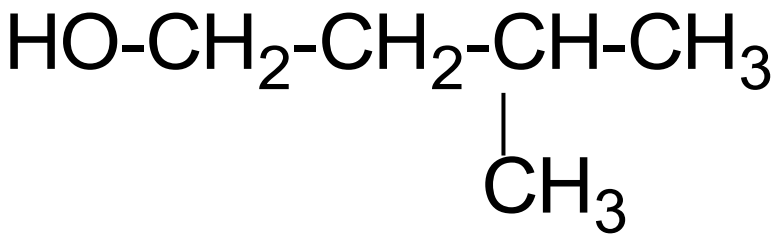
Pư với tt Lucas

b. 2-Metylbutanol-2



Không có C*

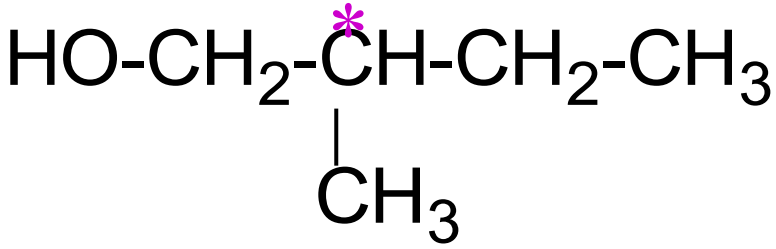
c. 3-Metylbutanol-1



Không có C*

(d)

d. 2-Metylbutanol-1

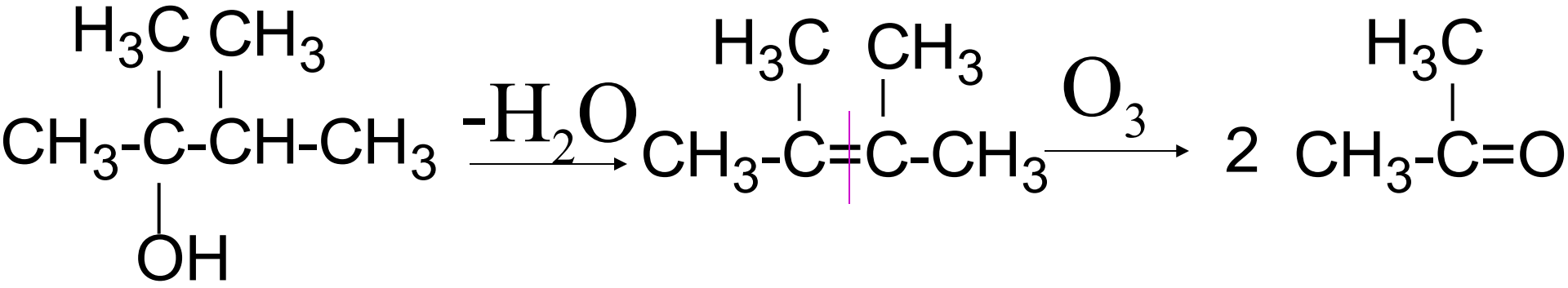


Không pư với tt Lucas

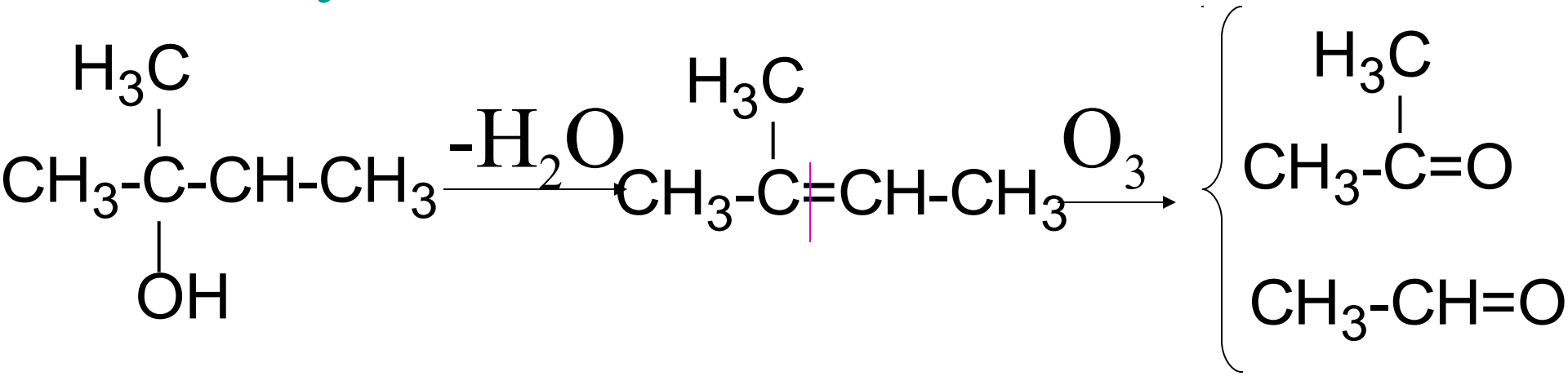
29. Rượu đơn chức(X)[- H_2O]→anken(Y).

Ozon giải 1 mol (Y) →2 mol axeton. A ?

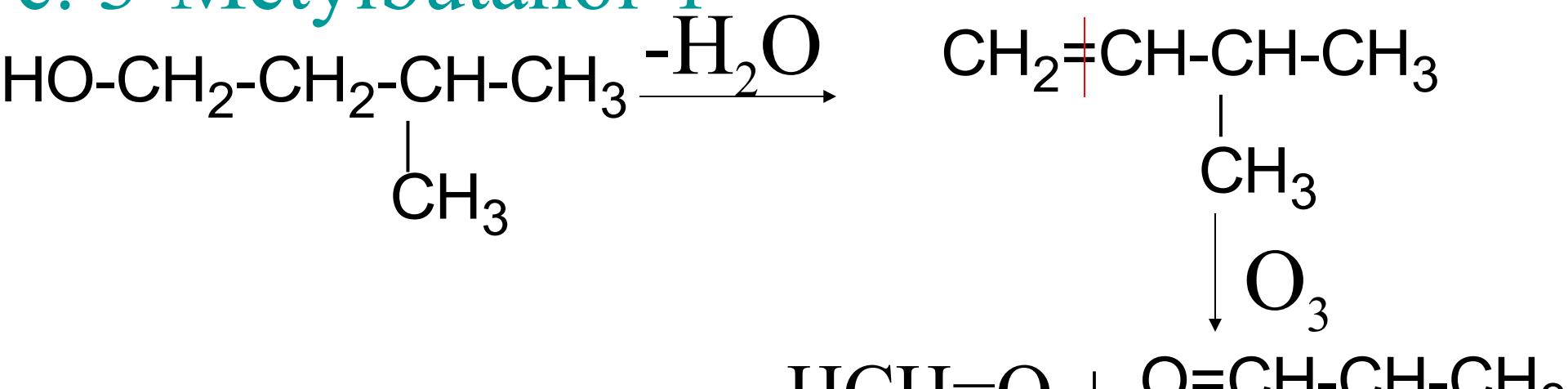
a. 2,3-Dimetylbutanol-2



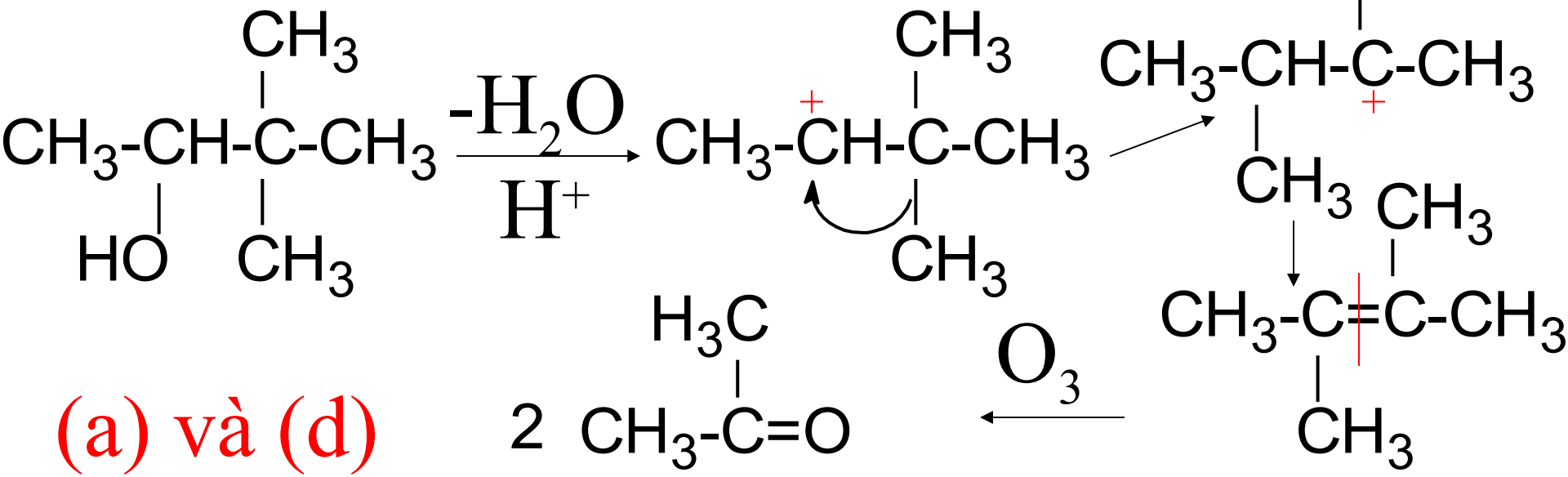
b. 2-Metylbutanol-2



c. 3-Metylbutanol-1



d.3,3-Dimetylbutanol-2

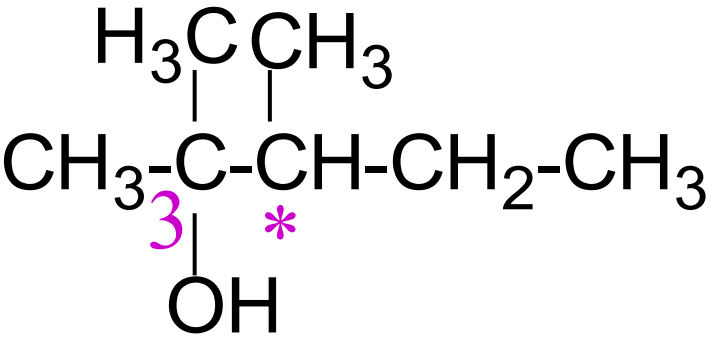


(a) và (d)

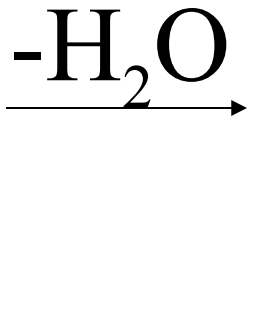
30.A($C_7H_{16}O$) có tính triền quang, pư nhanh với tt Lucas ở t° thường. A khử H_2O cho B, Ozon giải B cho 2 xeton, A,B ?

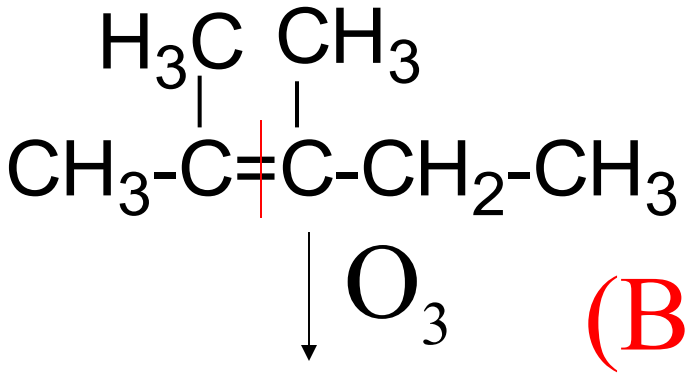
a. A: 2,3-Dimetylpentanol-2

B: 2,3-Dimetylpenten-2

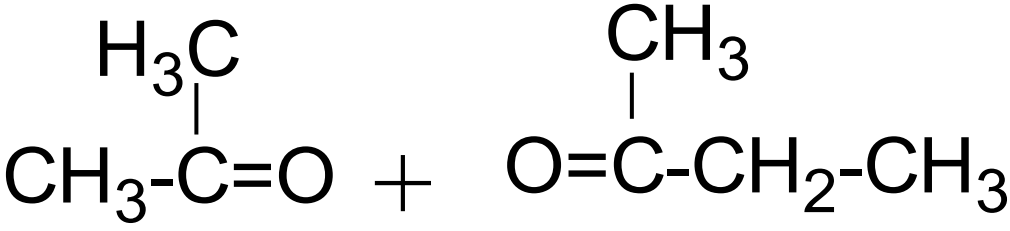


(A)

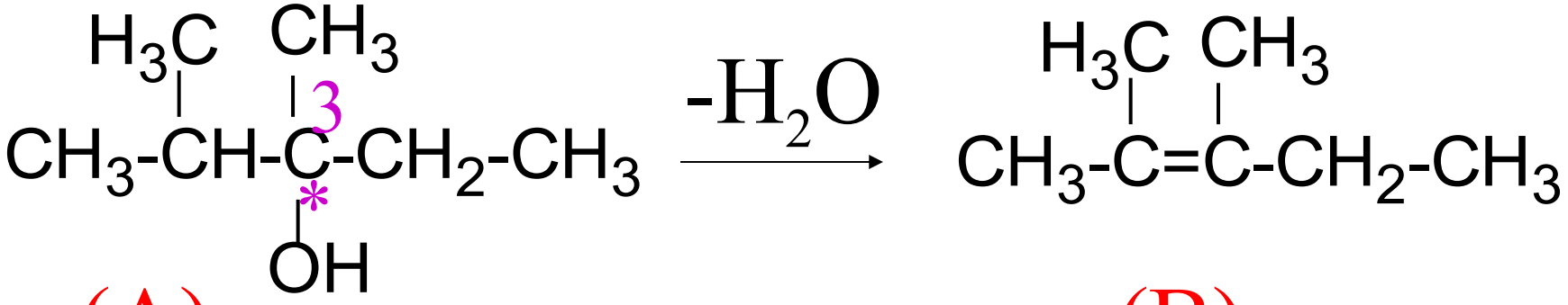




(B)

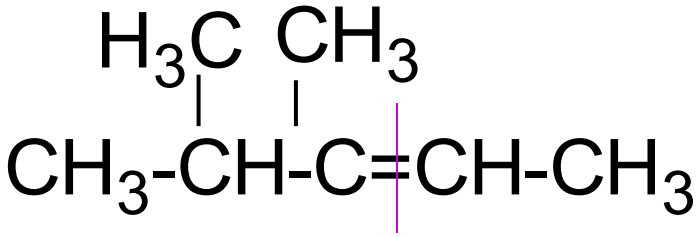


b. A: 2,3-Dimetylpentanol-3



(A) (B)

c. B: 2,3-Dimetylpenten-3

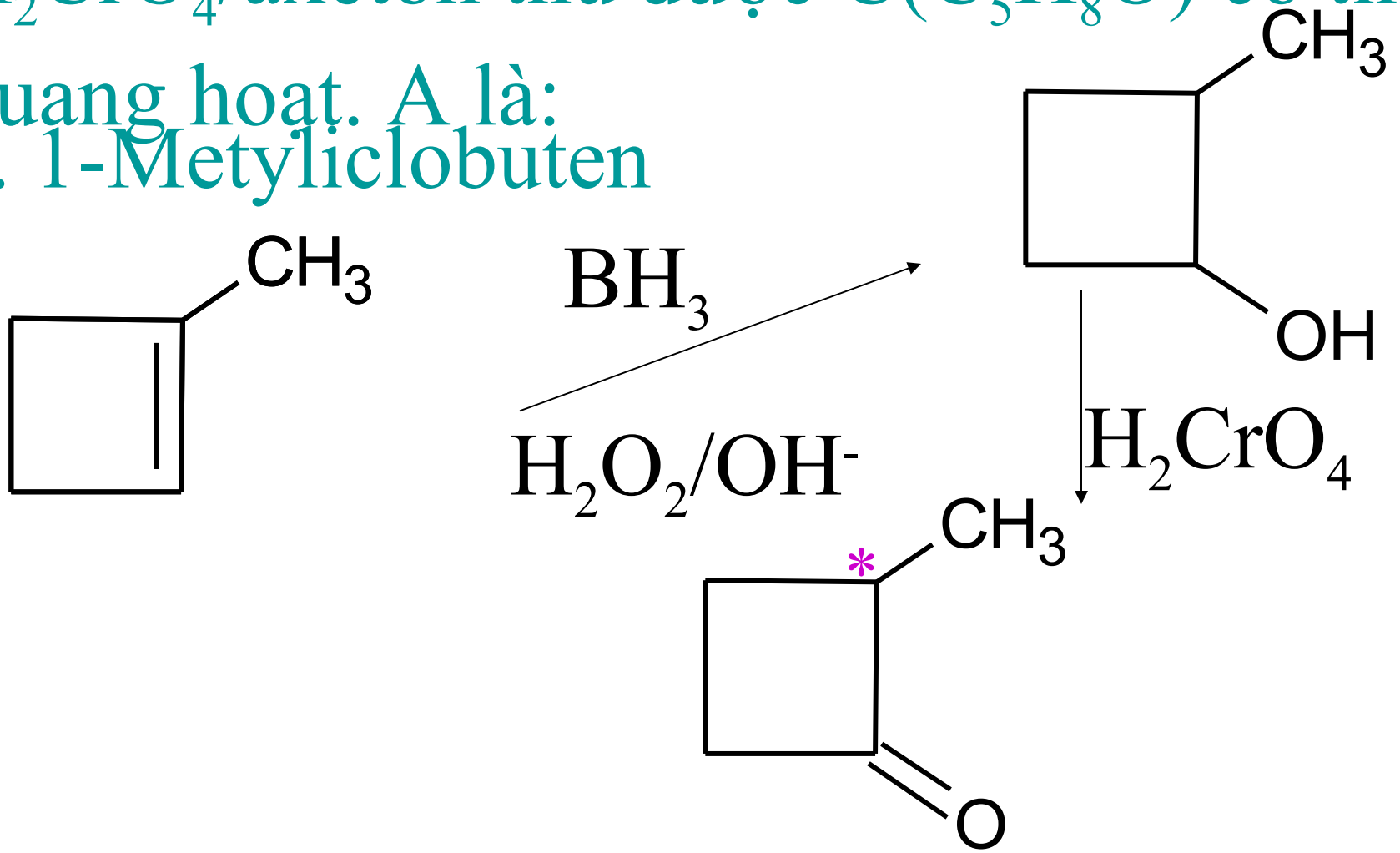


Sai

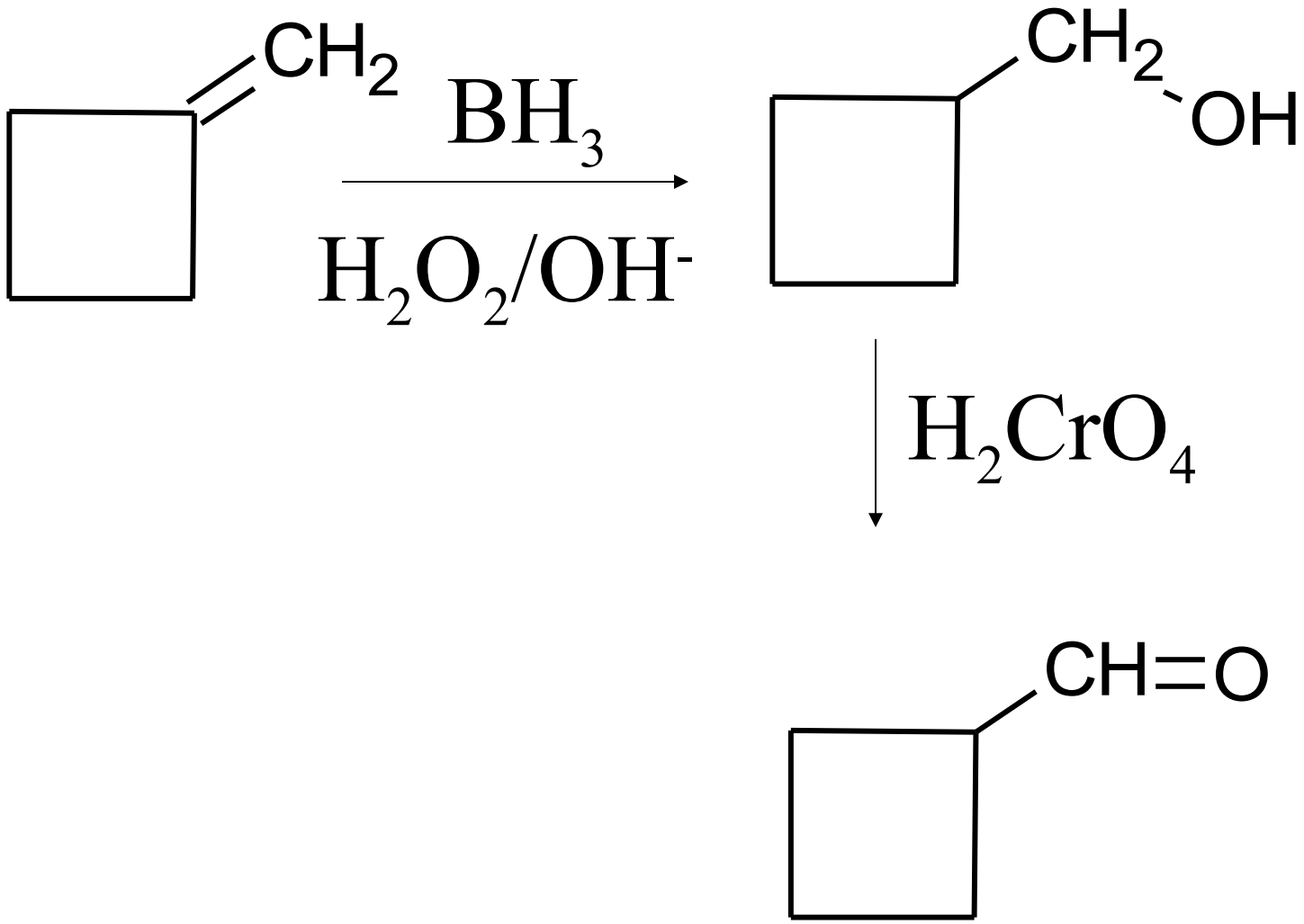
d. a,b đều đúng

31. A(C_5H_8) pư với BH_3 sau đó xử lý với H_2O_2 trong mt kiềm thu được B. B pư với H_2CrO_4/axeton thu được C(C_5H_8O) có tính quang hoạt. A là:

a. 1-Metyliclobuten

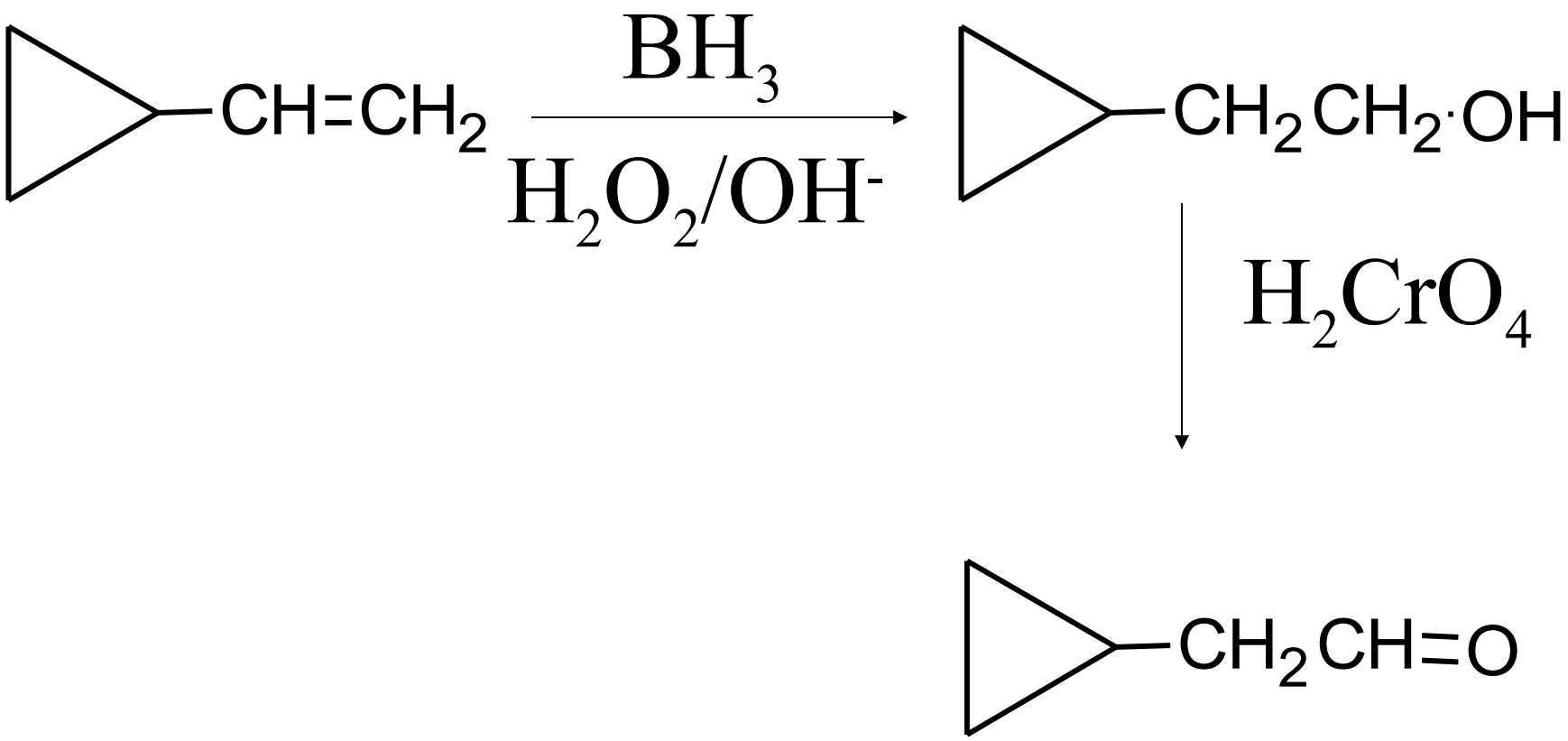


b. Metylenxiclobutan



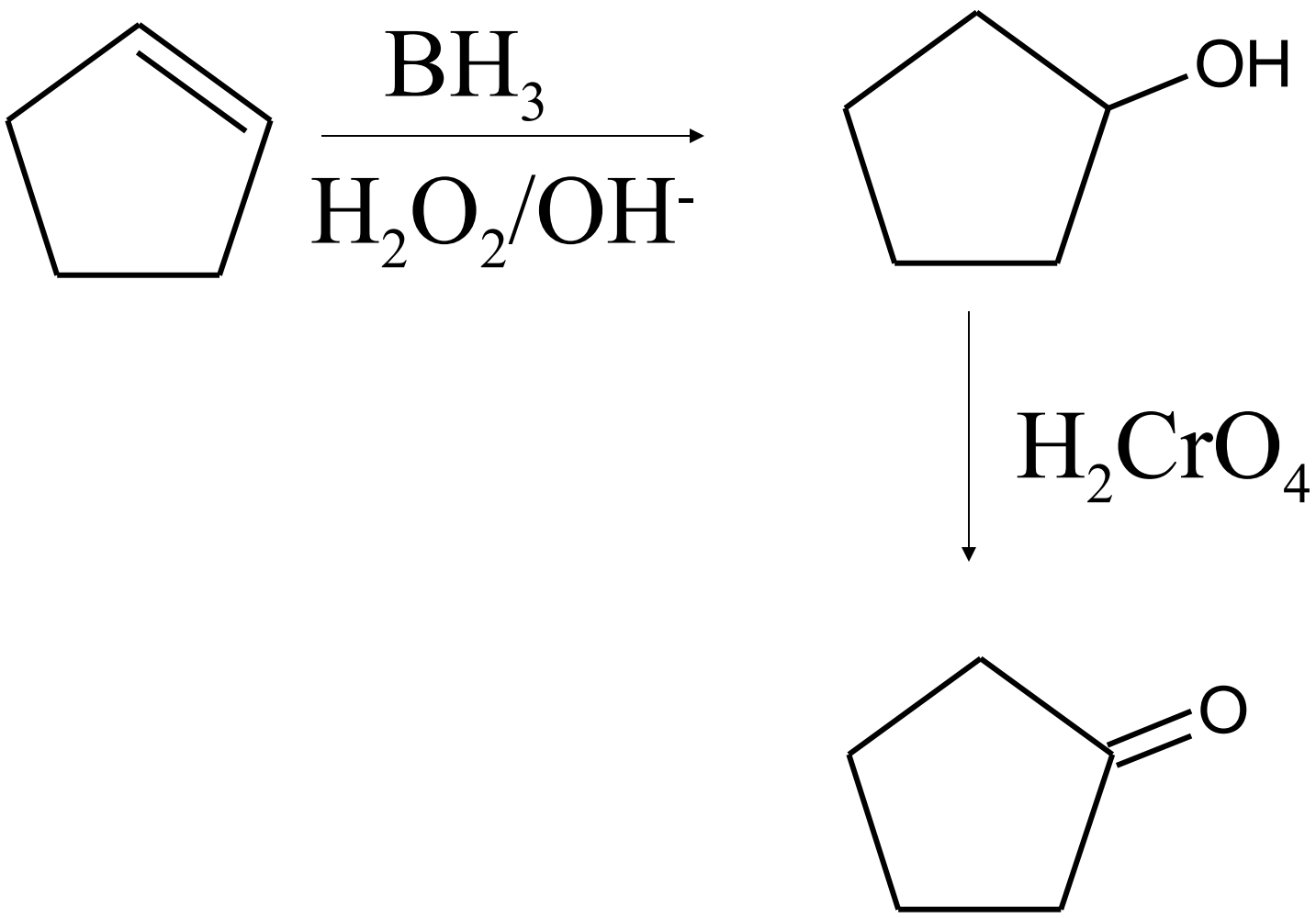
Không có C*

c. vinylxiclopropan



Không có C*

d. xiclopenten

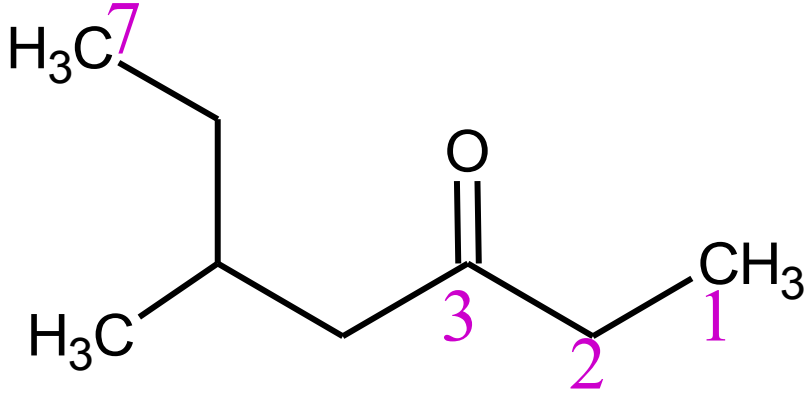


Câu (a)

Không có C*

ChươngV:Hợp chất carbonyl

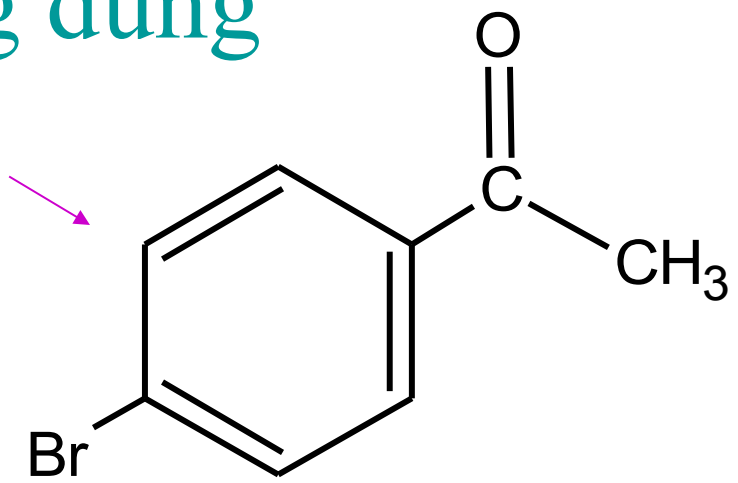
1. Tên quốc tế:



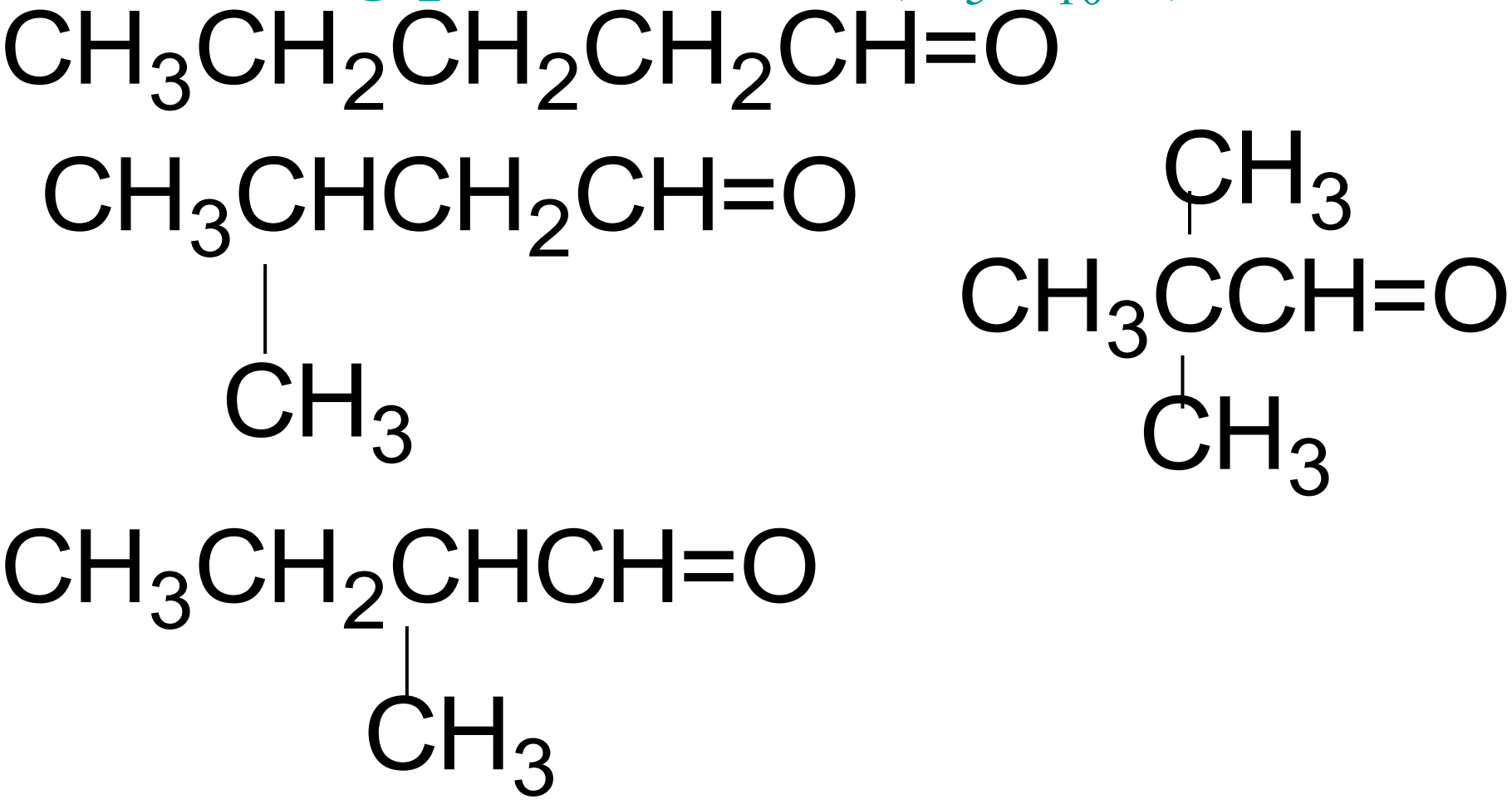
b. 5-Metyl-3-heptanon

2. Hợp chất đọc tên không đúng

d. p-Bromaxetophenon



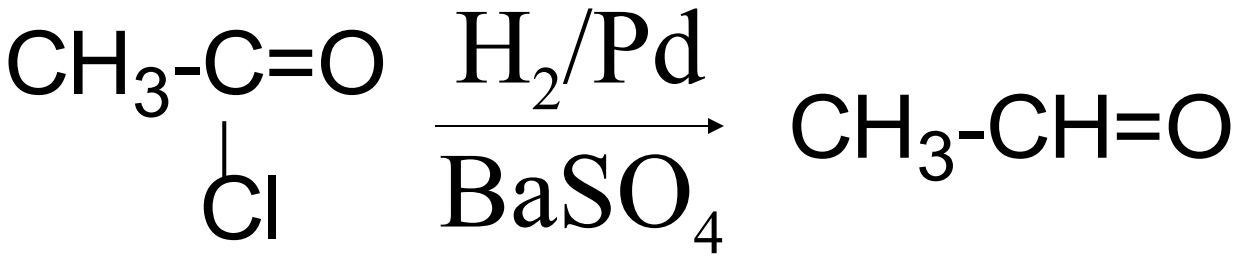
3. Số đồng phân andehit($C_5H_{10}O$)



(a) 4

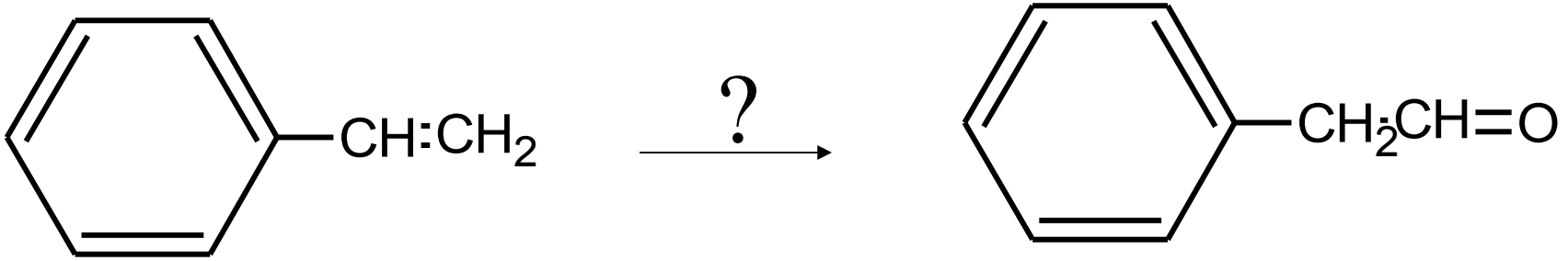
4. pư:

Acetyl clorua $\xrightarrow[BaSO_4]{H_2/Pd}$ Acetaldehit là pư?

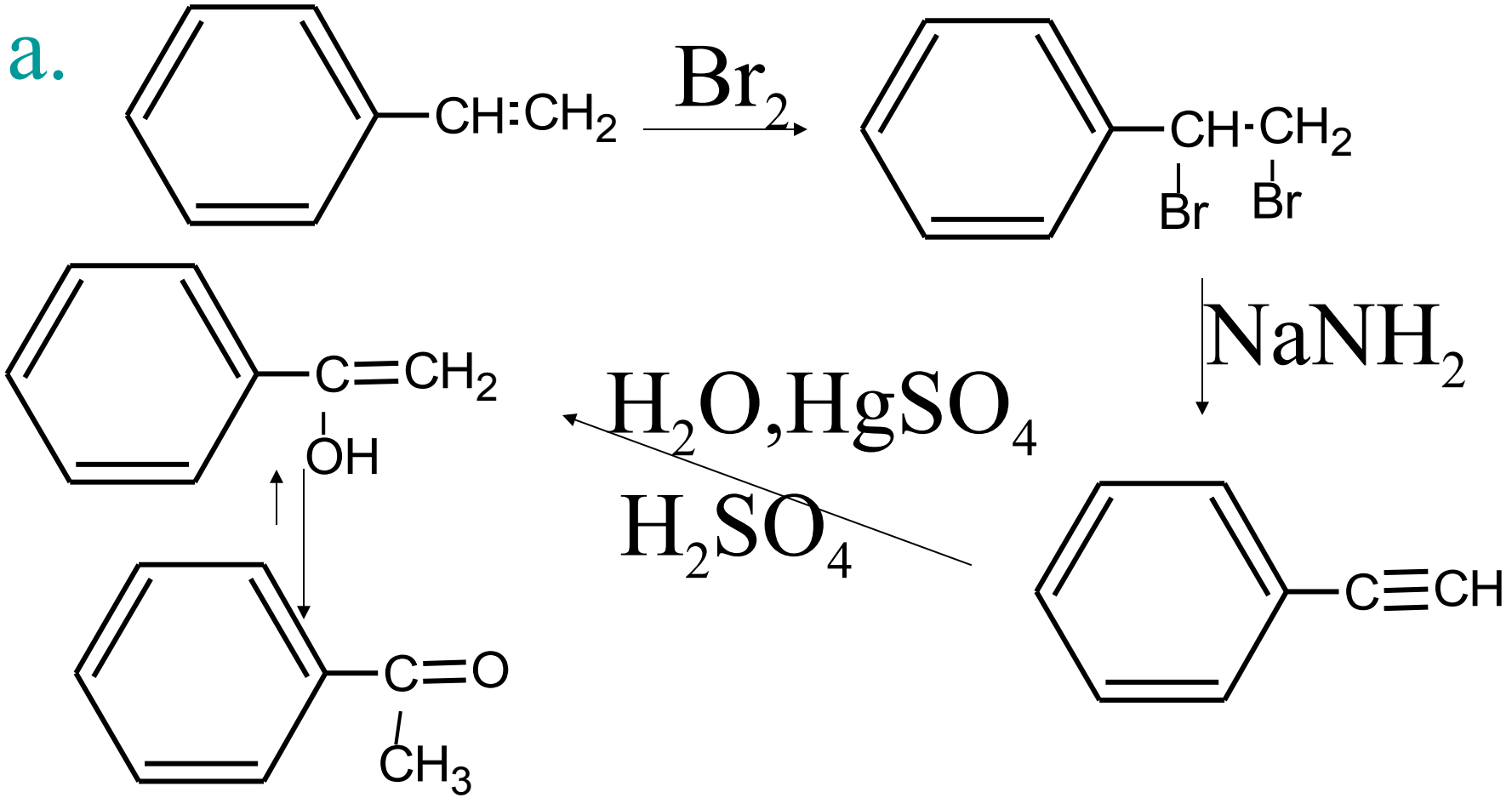


(a). Rosendmund

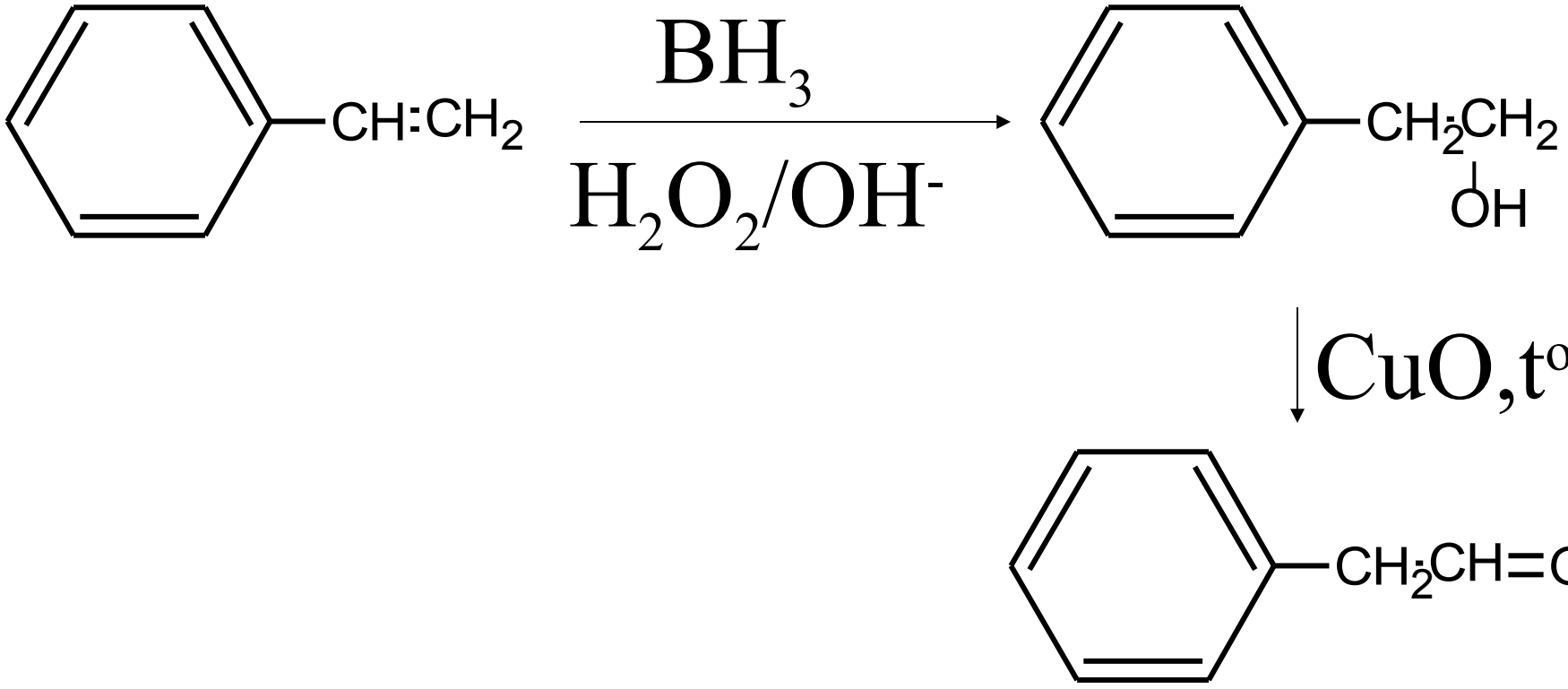
5. Quy trình đúng:



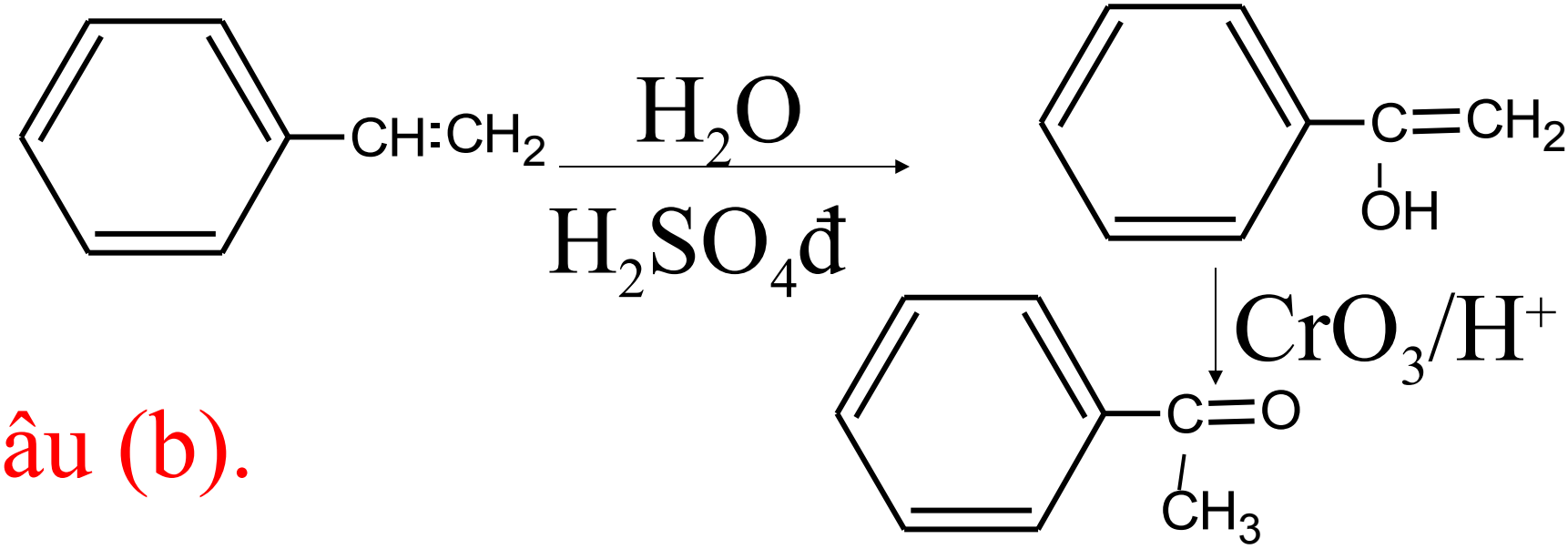
a.



b.


CH:CH2
BH3
H2O2/OH-
CH2CH2
OH
CuO,to
CH2CH=O

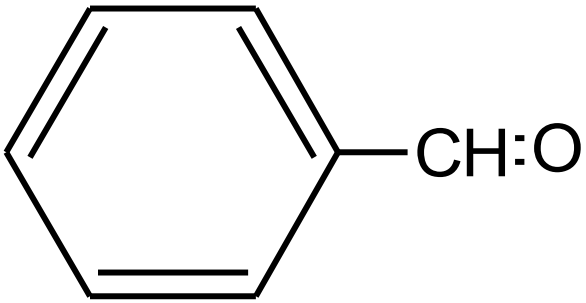
c.


CH:CH2
H2O
H2SO4đ
C=CH2
OH
CrO3/H+
C=O
CH3

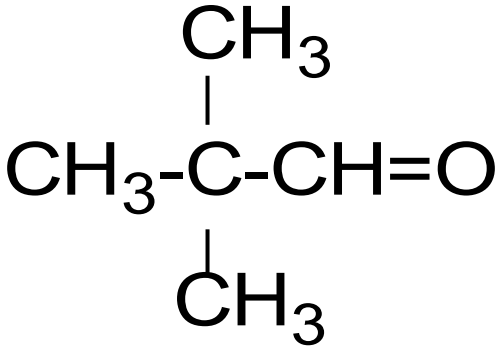
Câu (b).

6. Andehit nào cho hỗ biến enol?

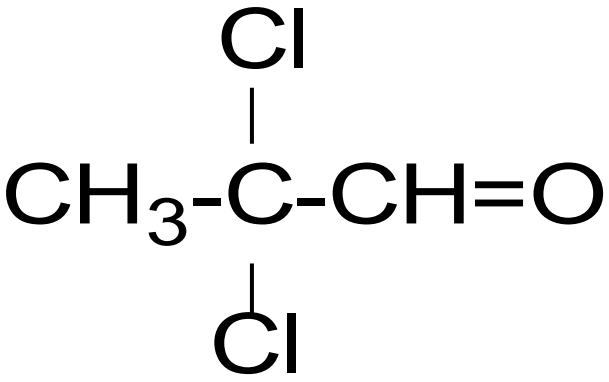
a. Benzaldehit

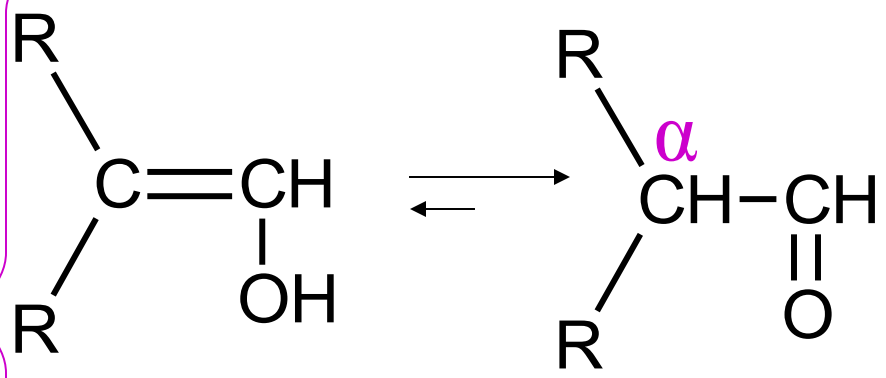


b. 2,2-Dimetylpropanal



c. 2,2-Diclopropanal

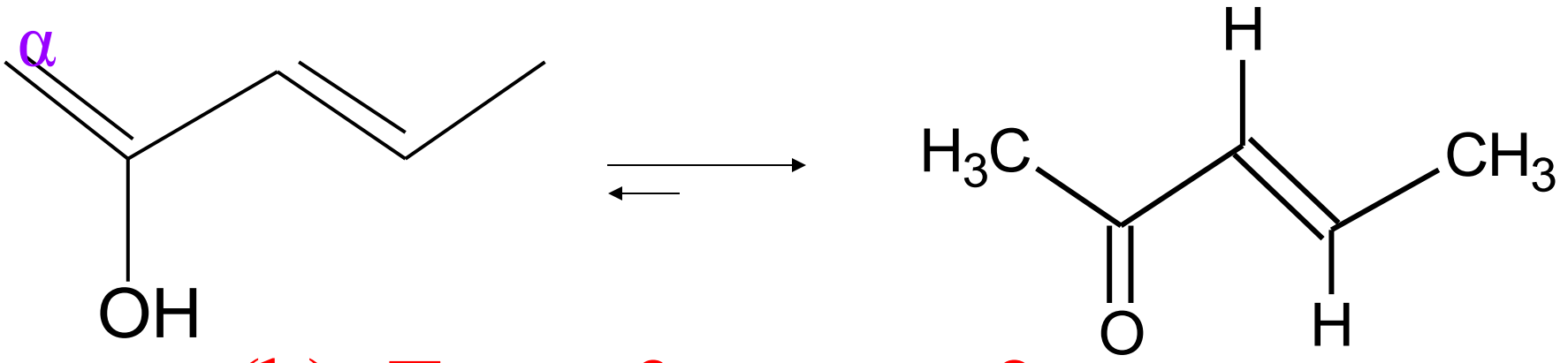




Chất nào có H_α mới cho hỗ biến enol

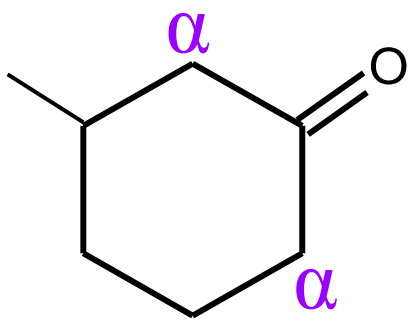
(a). Không có chất nào

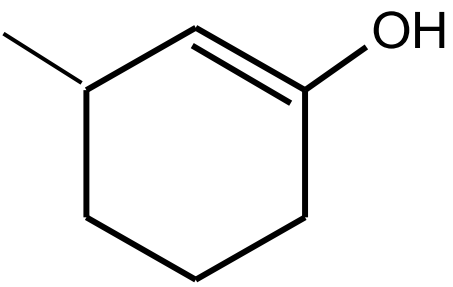
7. Dạng hỗ biến enol dưới đây là của:



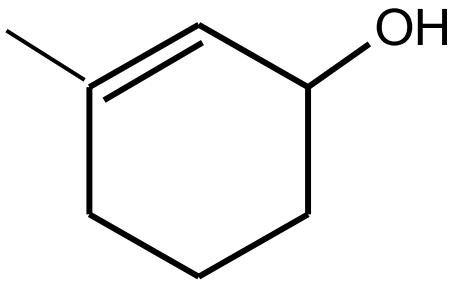
(b). Trans-3-penten-2-on

8. Chất nào là dạng hỗ biến của 3-metylxiclohexanon?

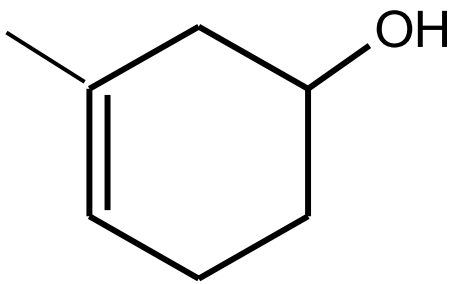




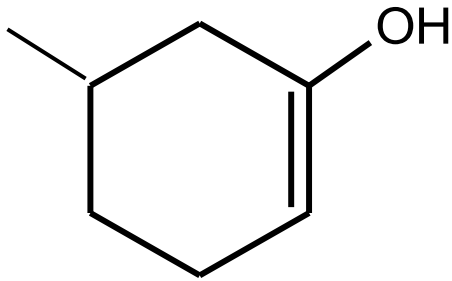
(I)



(II)



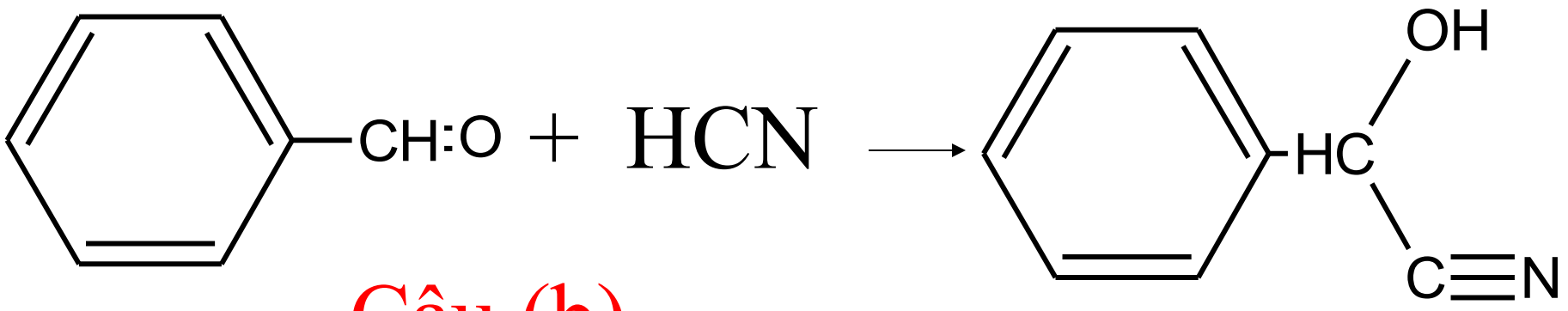
(III)



(IV)

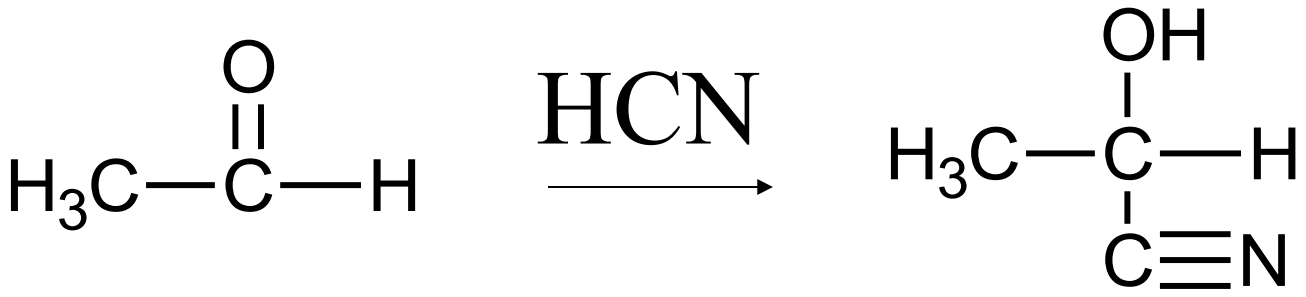
(b). (I) và (IV)

9. Sp của pư giữa benzaldehit và HCN là:



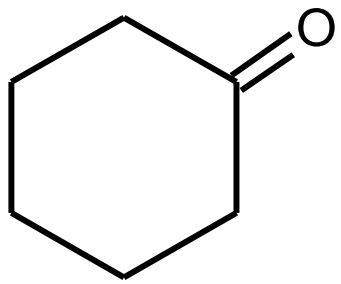
Câu (b)

10. Sp của pư:



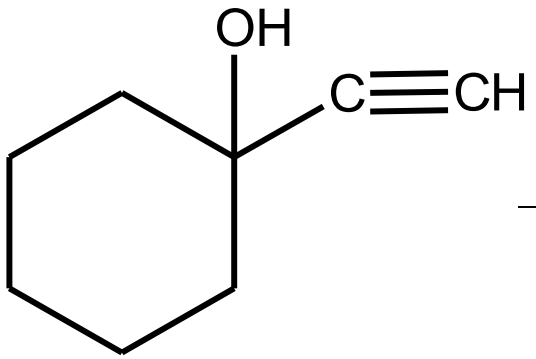
Câu (c)

11. Sp của pư:

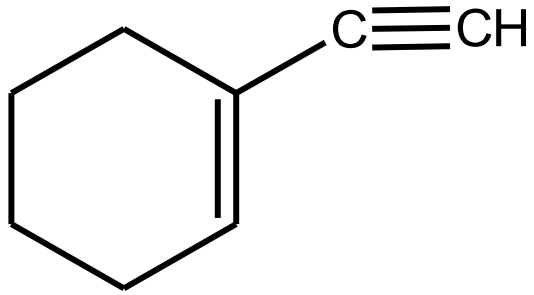


HCN H_2SO_4, t^o

HCN

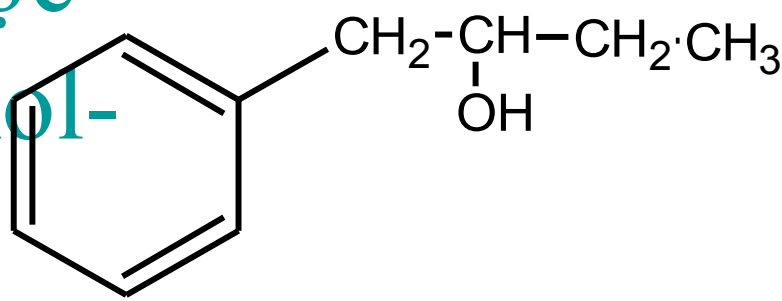


H_2SO_4, t^o

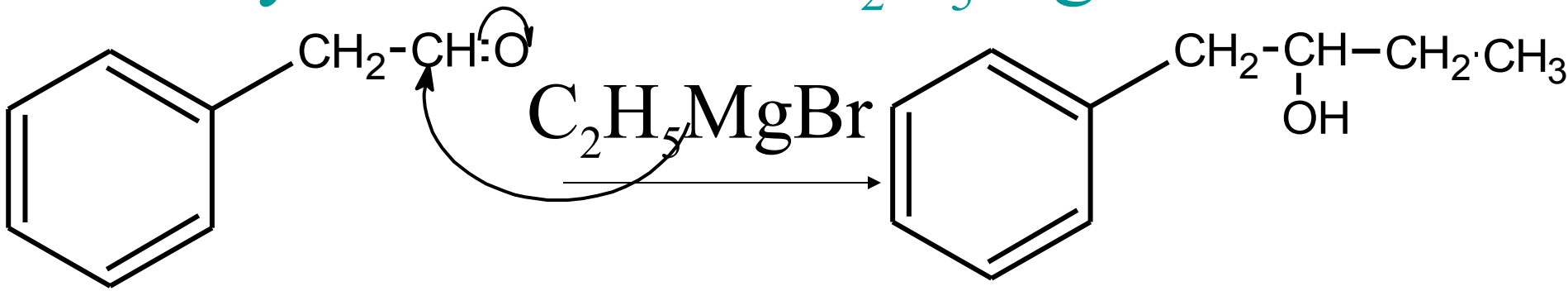


Câu (d)

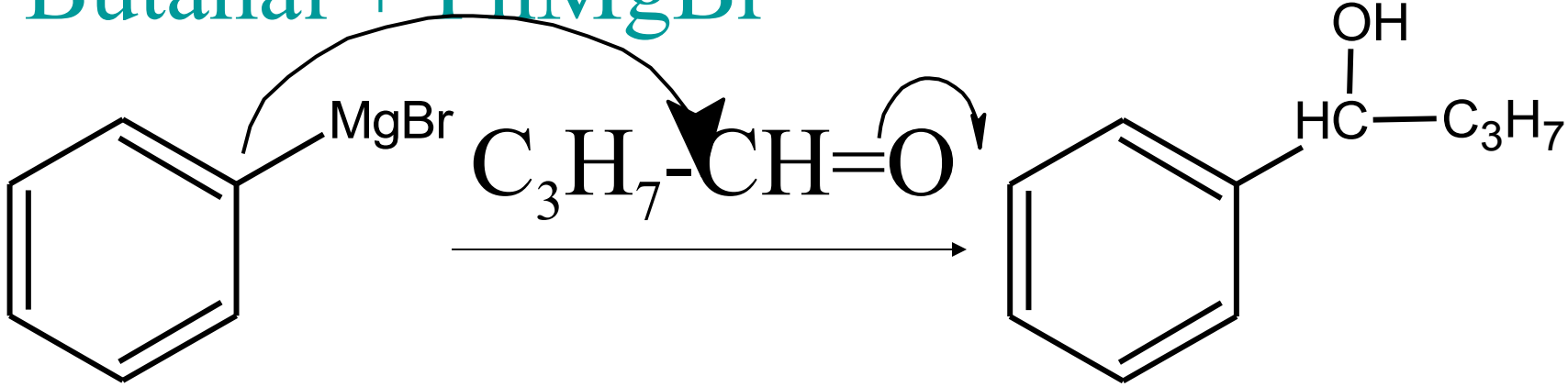
12. Pư không điều chế được 1-phenylbutanol-2



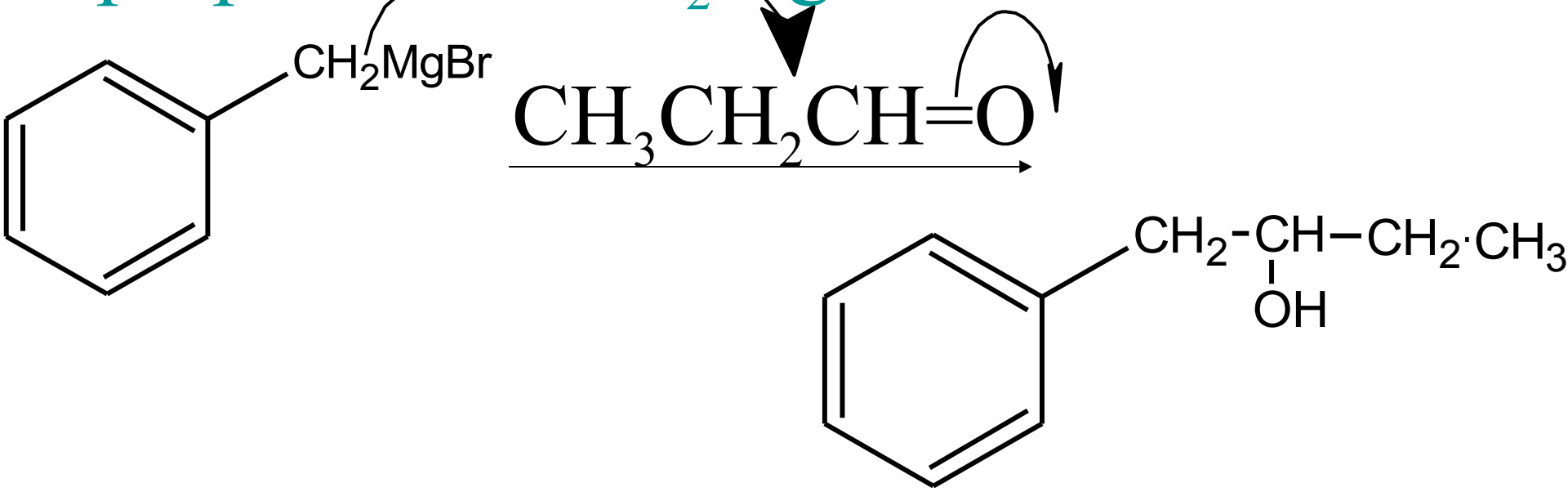
a. Phenylacetaldehit + C_2H_5MgBr



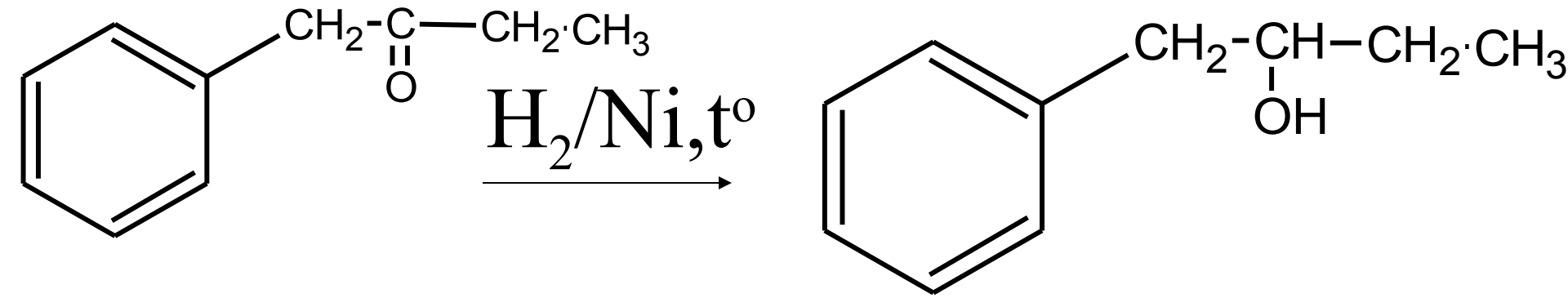
b. Butanal + PhMgBr



c. propanal+ $PhCH_2MgBr$

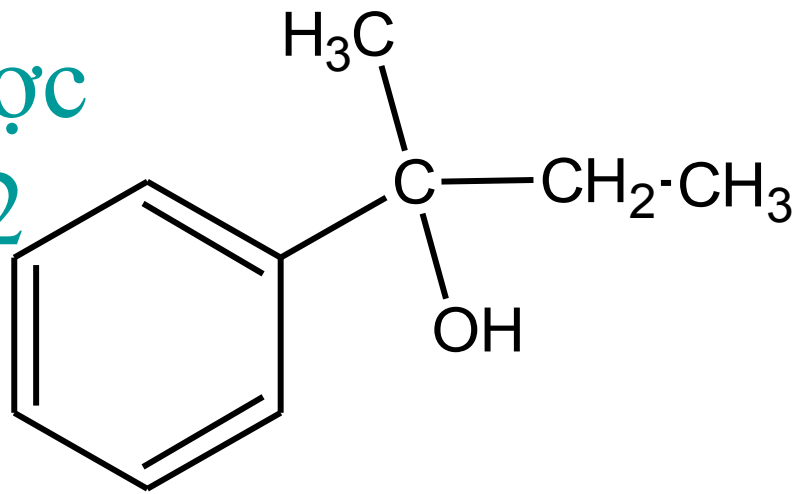


d. 1-phenylbutanon-2 + $H_2/Ni,t^o$

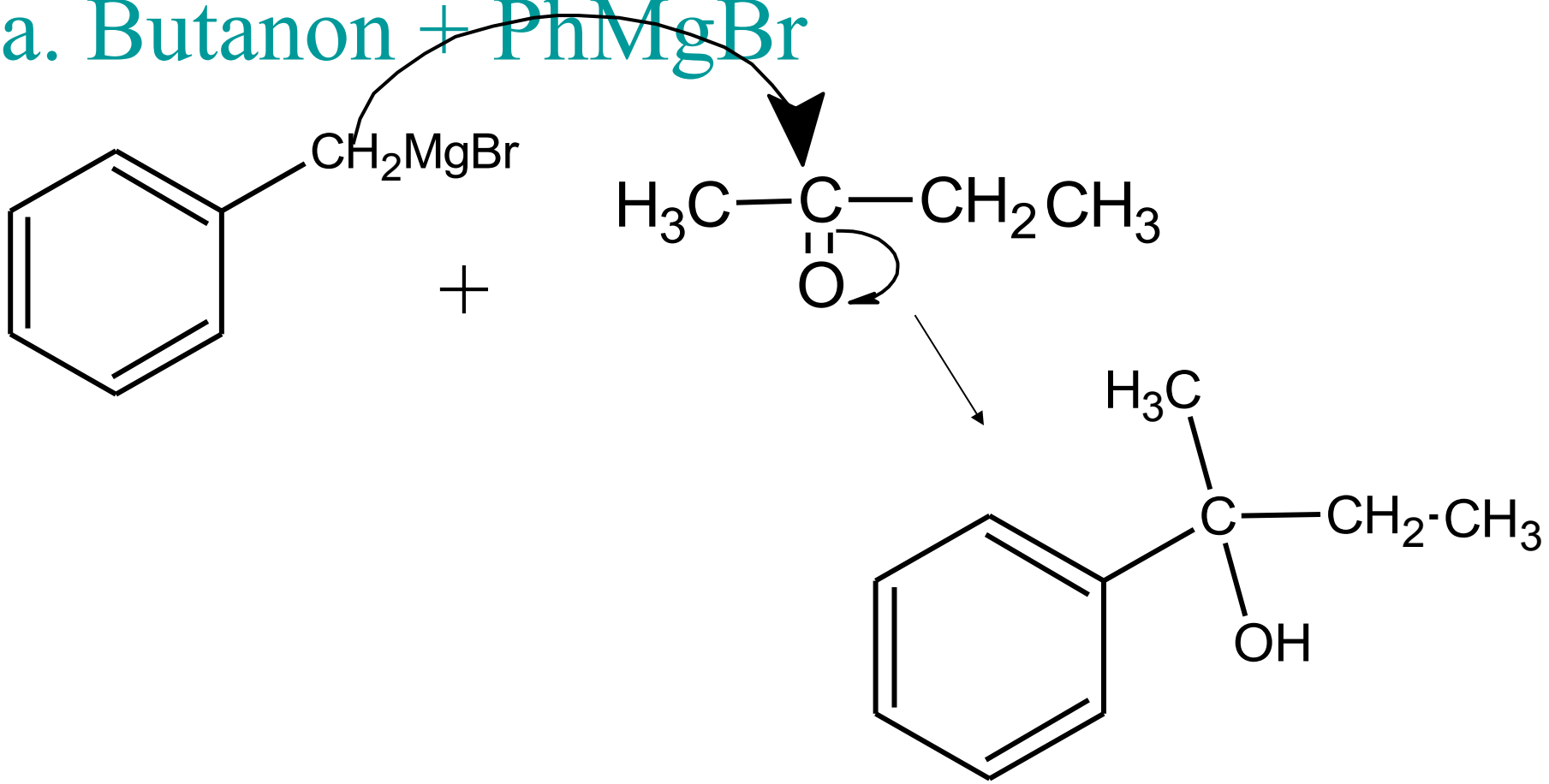


Câu (b)

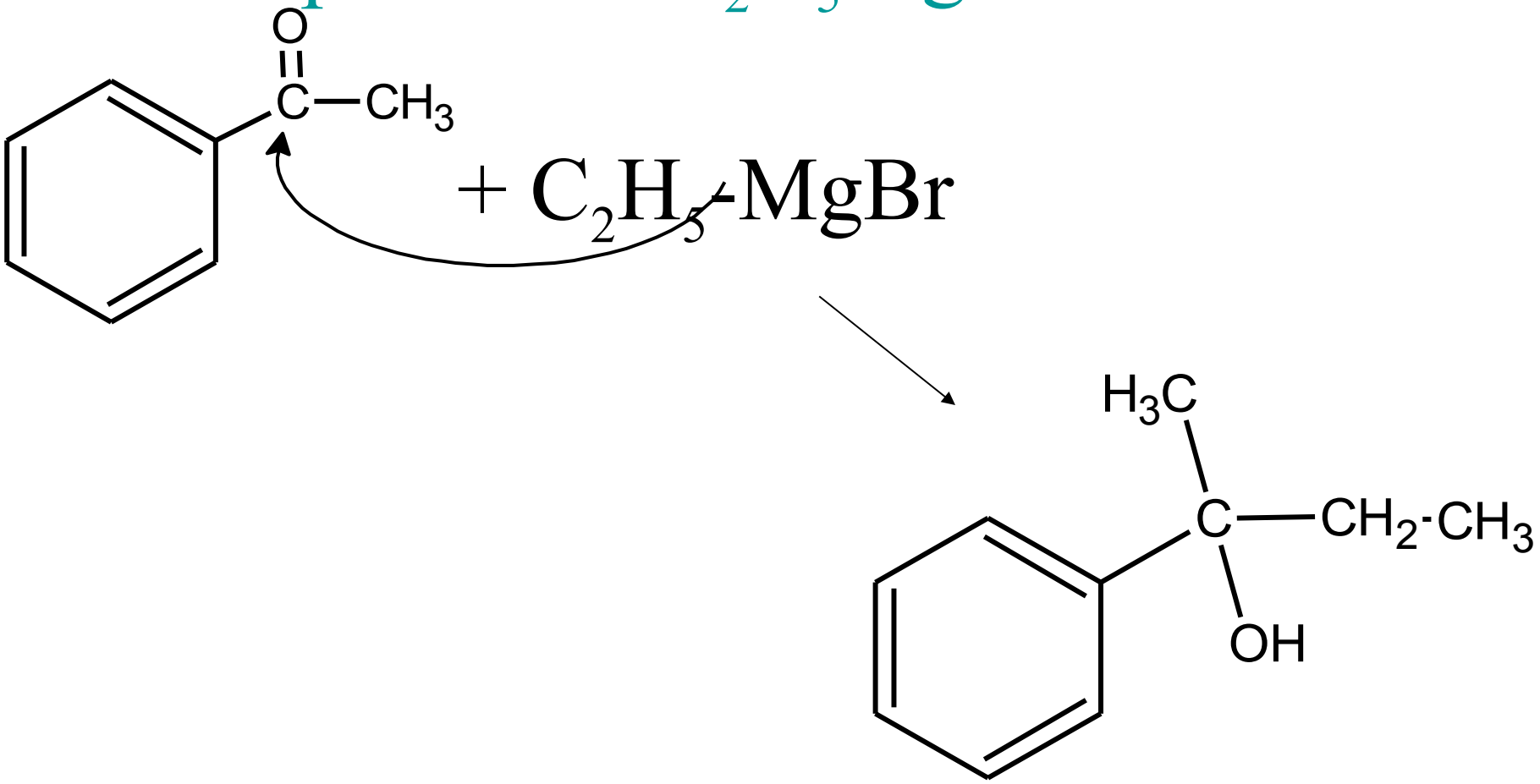
13. Pư không điều chế được 2-phenylbutanol-2



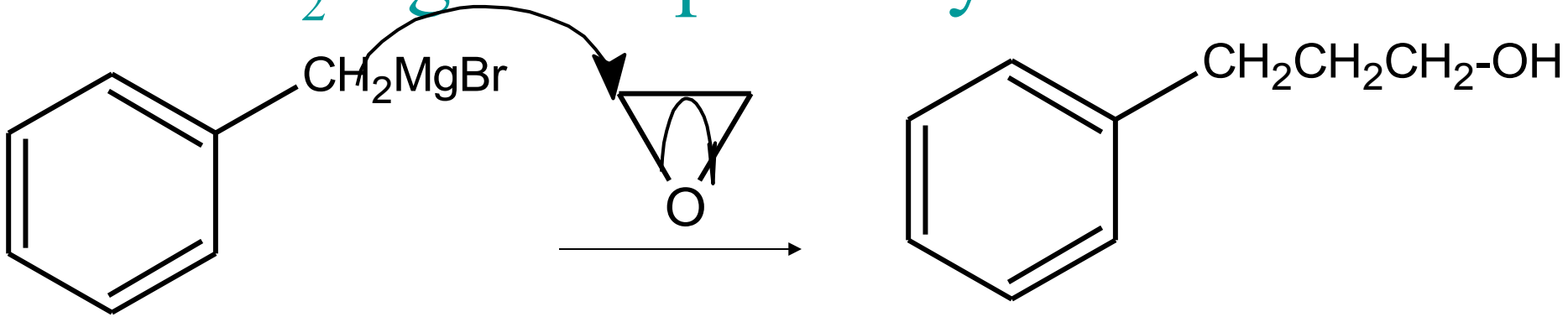
a. Butanon + PhMgBr



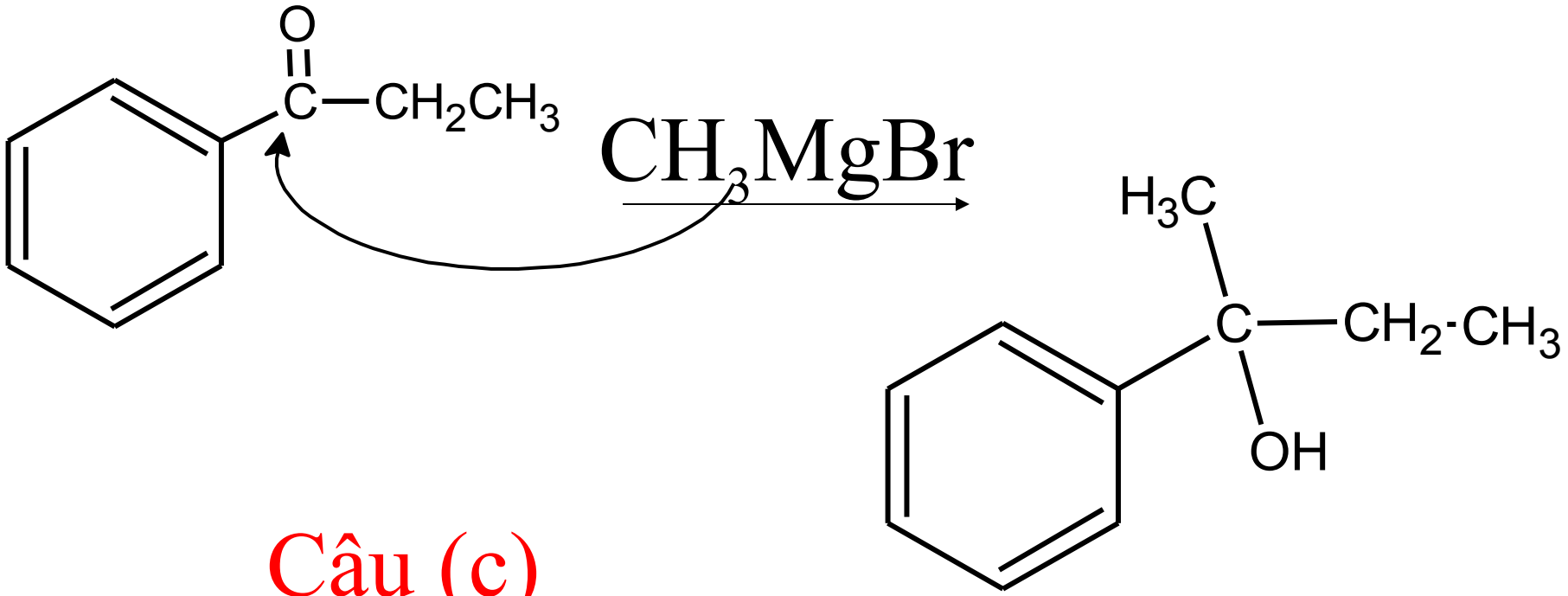
b. Acetophenon + C_2H_5MgBr



c. $PhCH_2MgBr$ + epoxit etylen

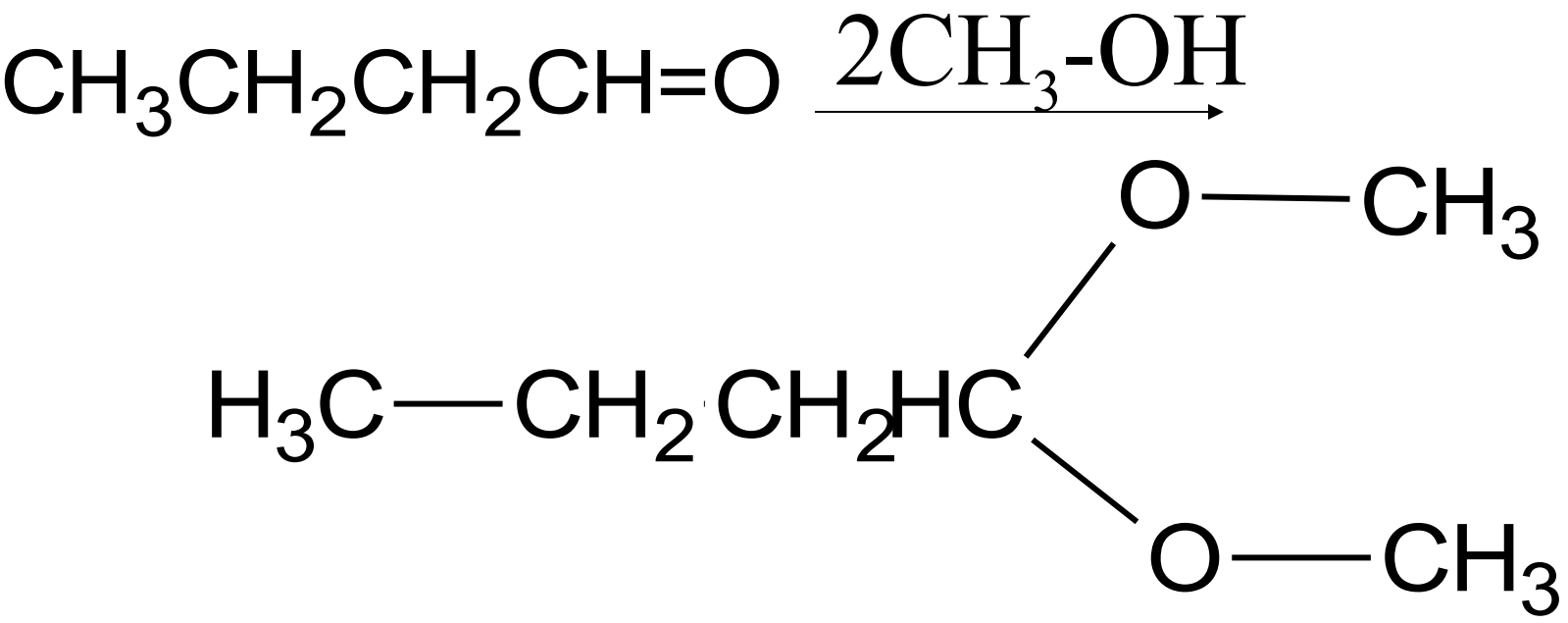


d. Etylphenylxeton + CH_3MgBr



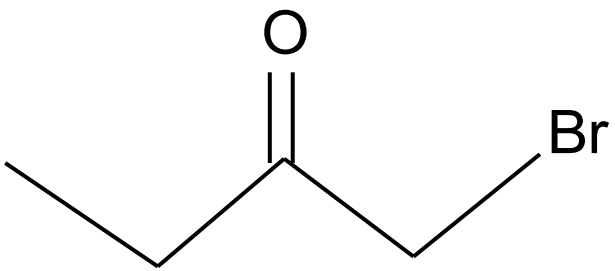
Câu (c)

14. Butanal + metanol(dư)/H_2SO_4đđ → ?

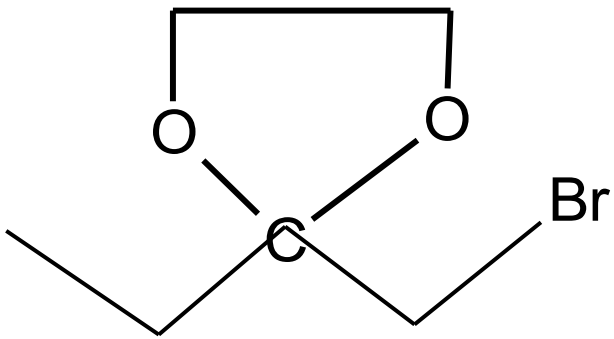


(d). $CH_3CH_2CH_2CH(OCH_3)_2$

15. Sp của pư:

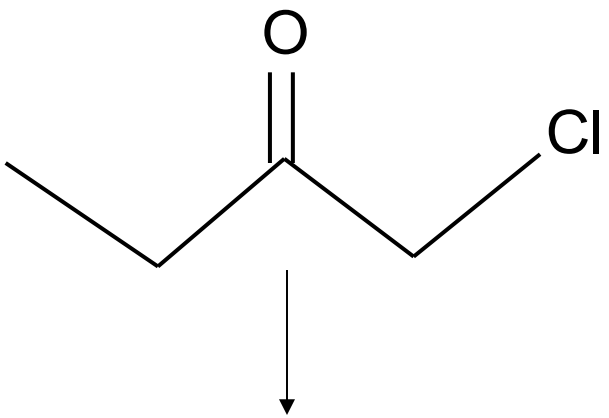


$$\xrightarrow[H_2SO_4]{HOCH_2CH_2OH}$$

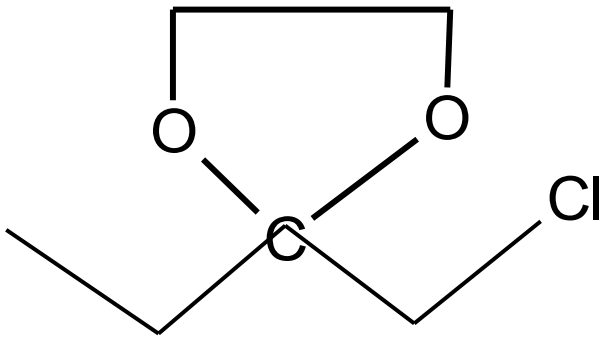


Câu (a)

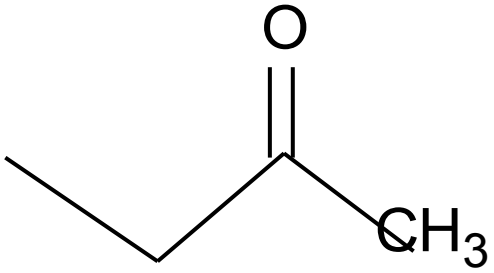
16. Sp của chuỗi pứ:



$\xrightarrow[H_2SO_4]{HOCH_2CH_2OH}$ $\xrightarrow[H_3O^+]{LiAlH_4}$

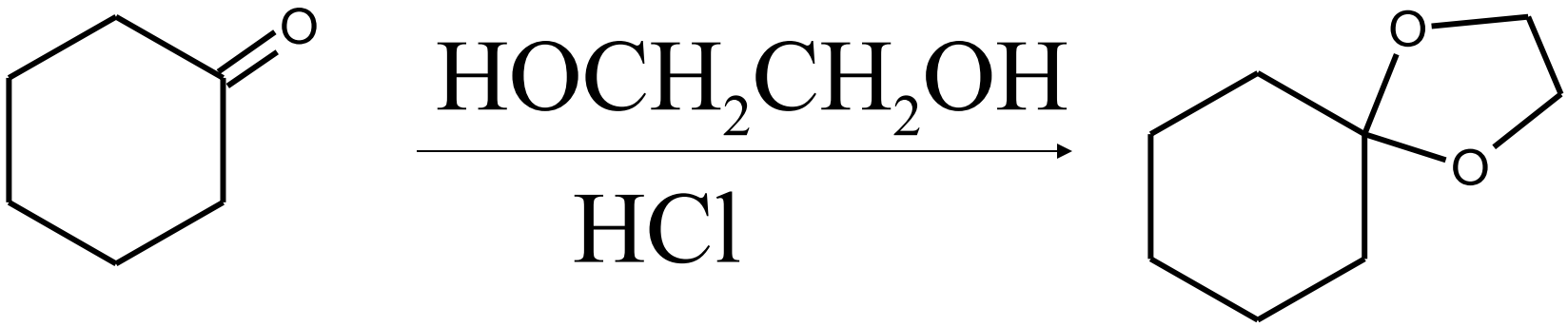


$\xrightarrow[H_3O^+]{LiAlH_4}$



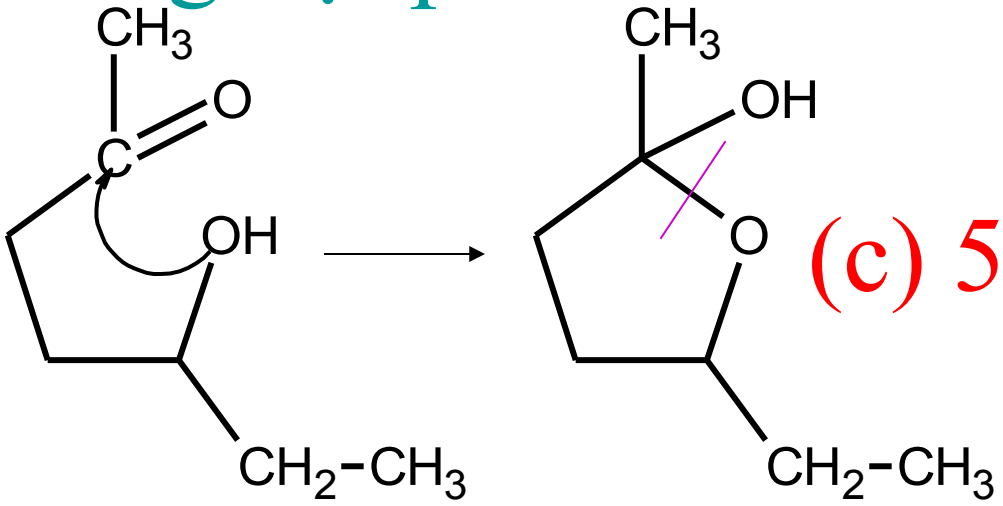
Câu (d)

17. Sp của pư:



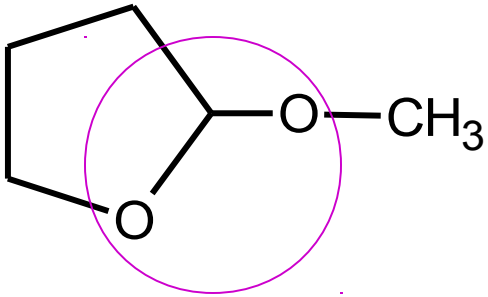
Câu (b)

18. Chất dưới đây là sp hemiacetal đóng vòng nội phân tử của:

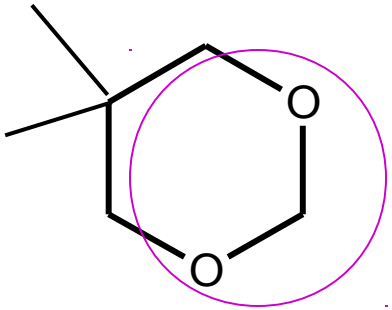


(c) 5-hydroxyheptanon-2

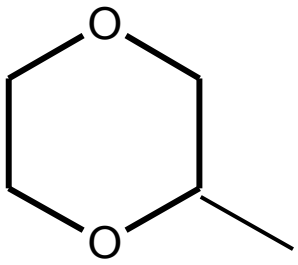
19. Chất nào dưới đây là 1 acetal



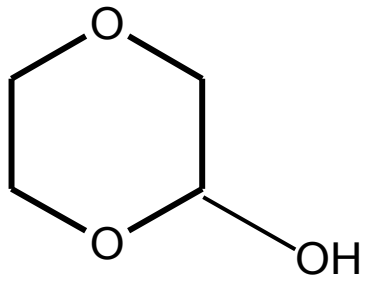
(I)



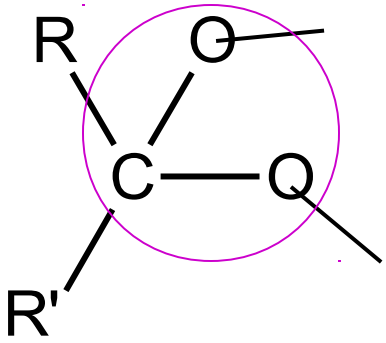
(II)



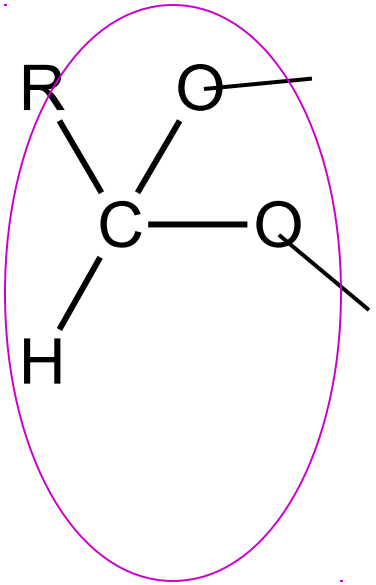
(III)



(IV)



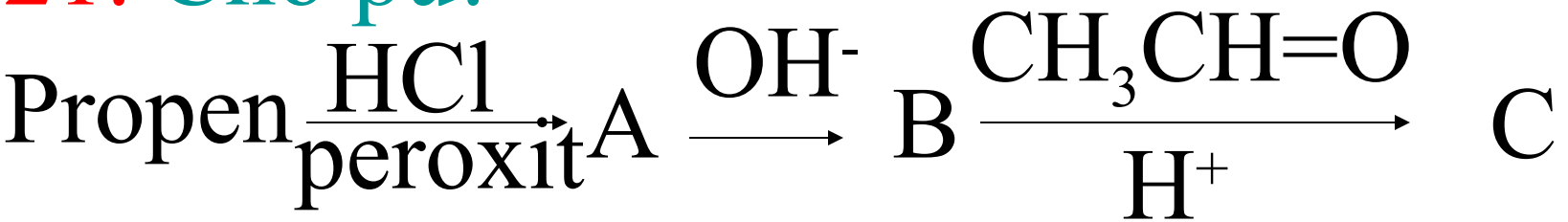
xetal

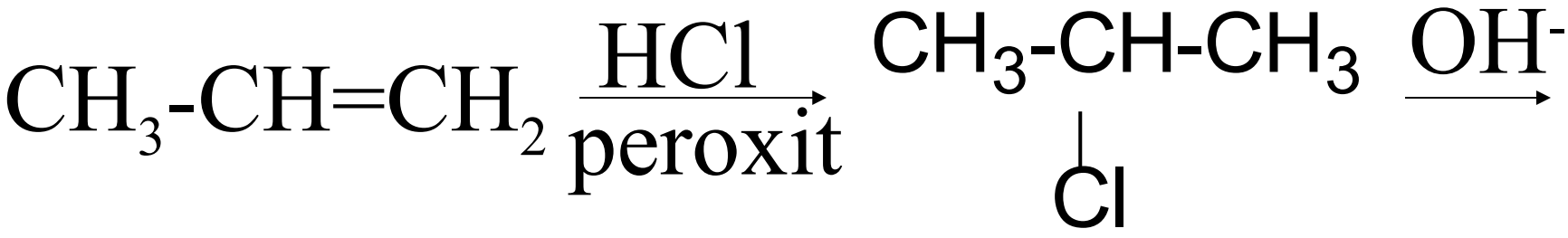


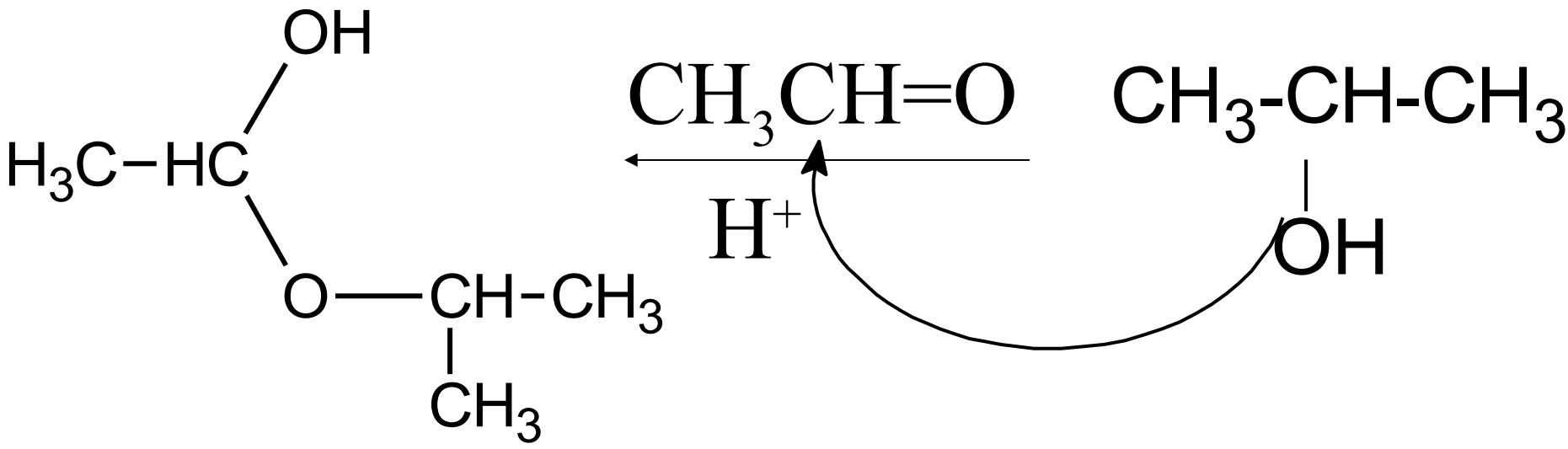
axetal

a. I và II

21. Cho pư:



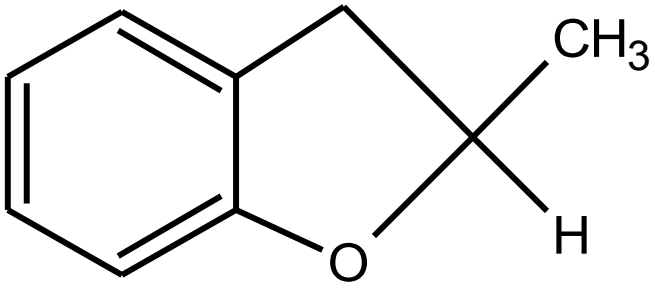




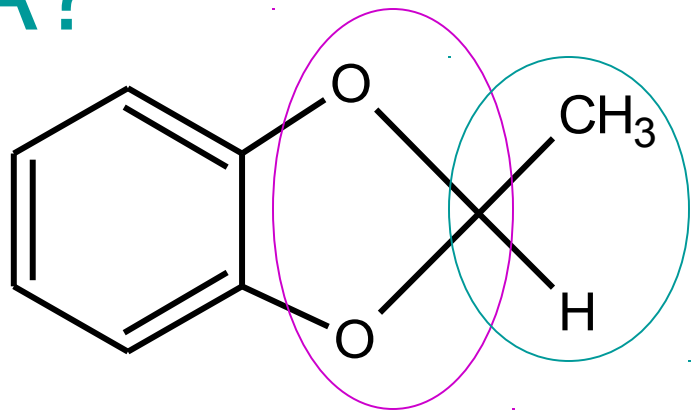
Câu (c)

22. A + HCl → etanal: A?

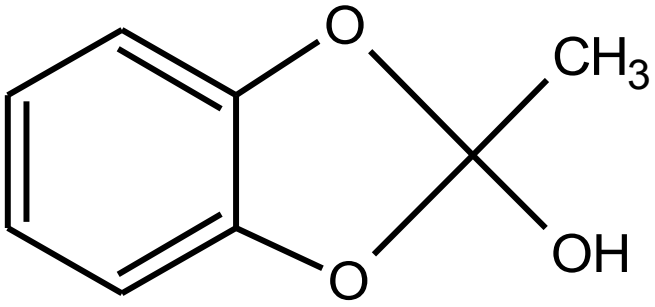
a.



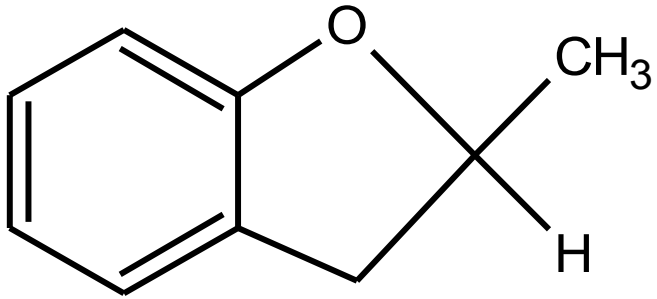
b.



c.

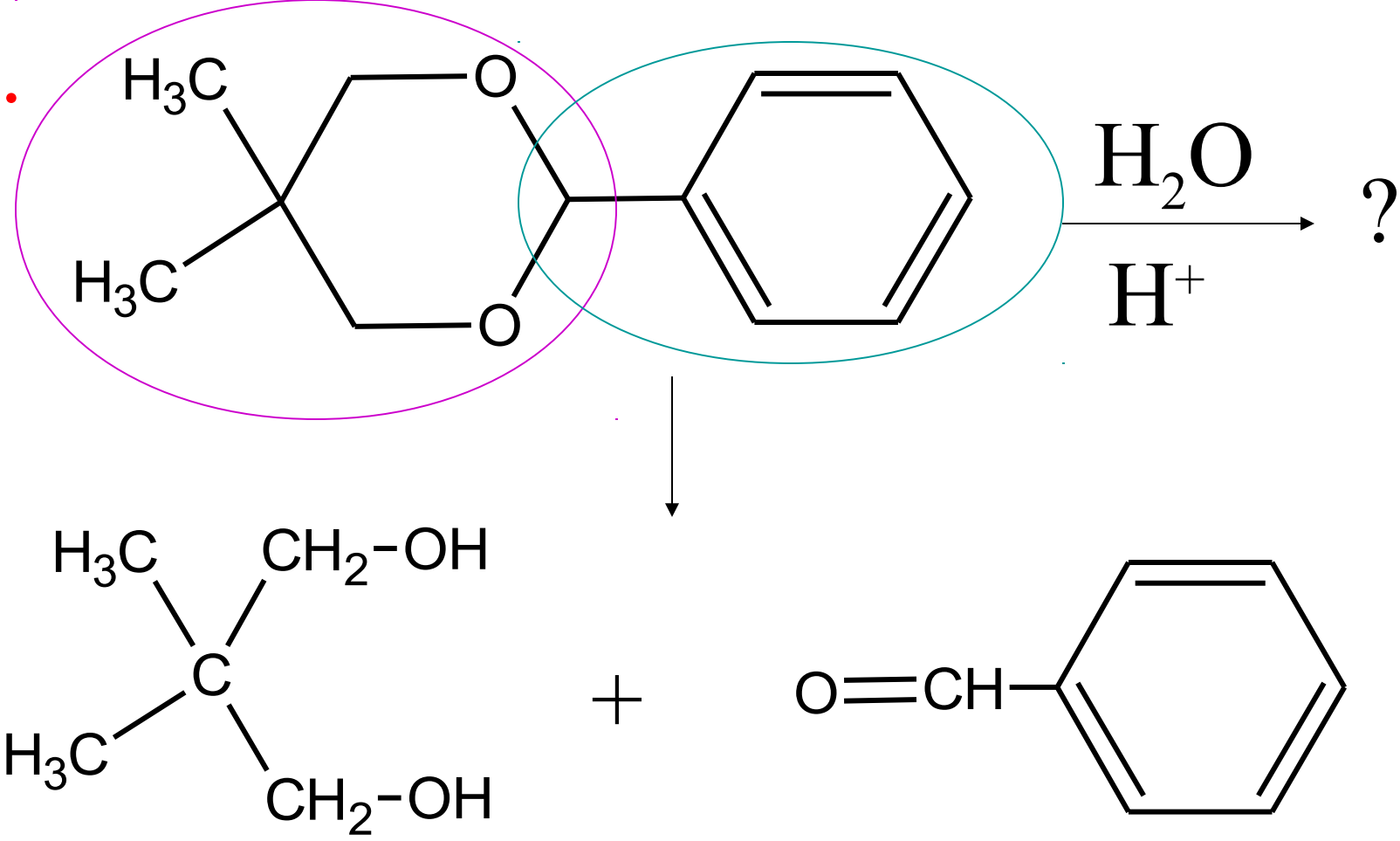


d.



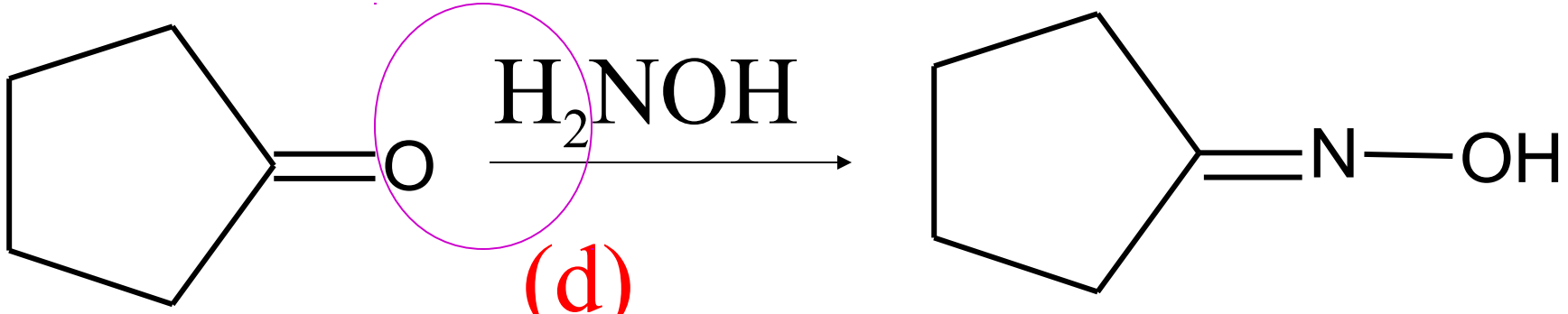
Câu (b)

23.



(b). Benzaldehit và
2,2-Dimetylpropadiol-1,3

24. Sp của pư:



(d)

25. Acetaldehit + Hidrazin → ?

CH_3-CH=O $\xrightarrow{H_2N\text{-}NH_2}$ CH_3-CH=N-NH_2

(c)

26. Chất cho pư Andol hóa?

a. Tricloaxetandehit b. 2,2-Dimetylpropanal

Cl_3C-CH=O CH_3-$C(CH_3)_2$-CH=O

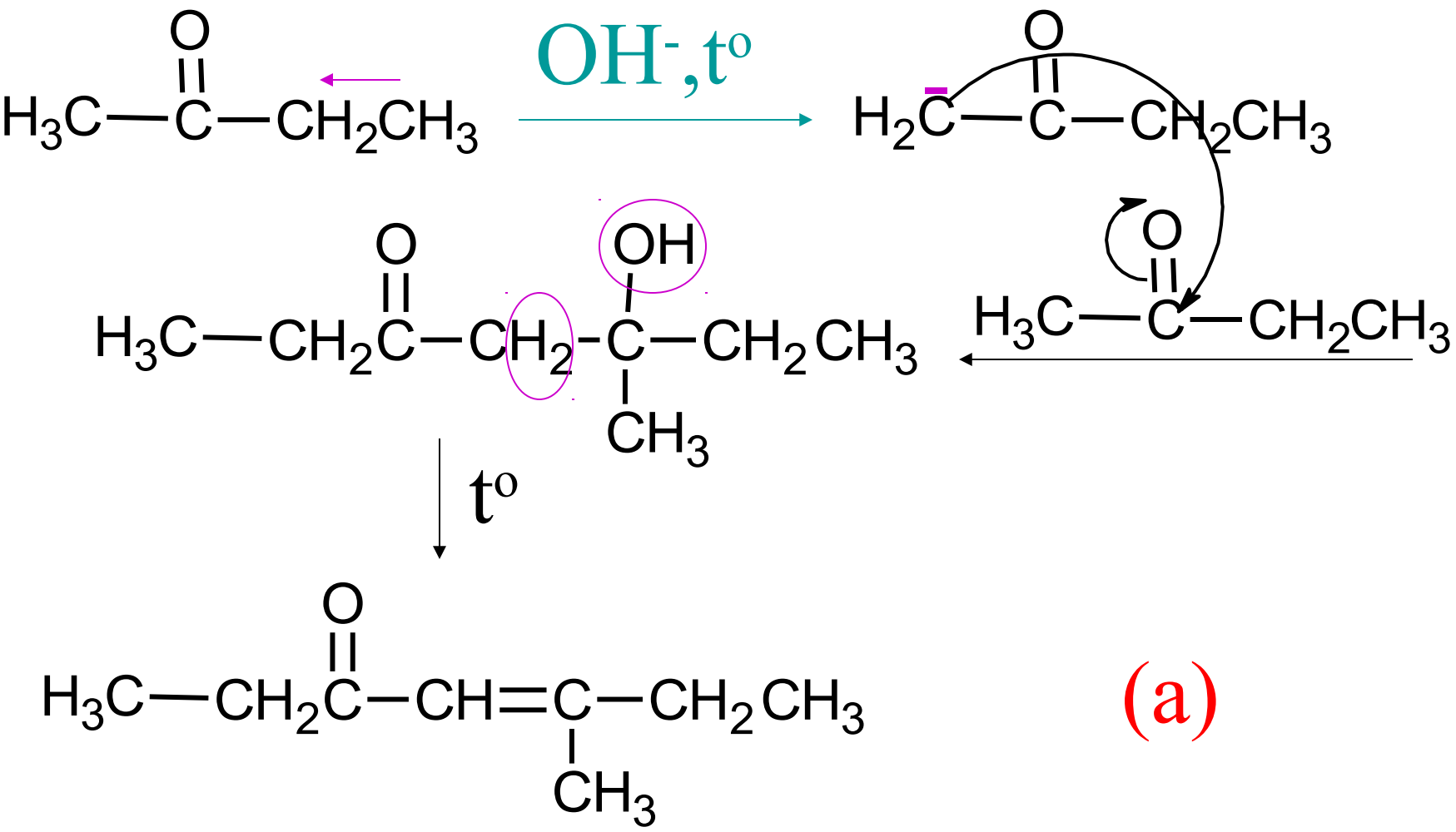
c. Phenylaxetandehit d. Benzandehit

C_6H_5-CH_2-CH=O C_6H_5-CH=O

α

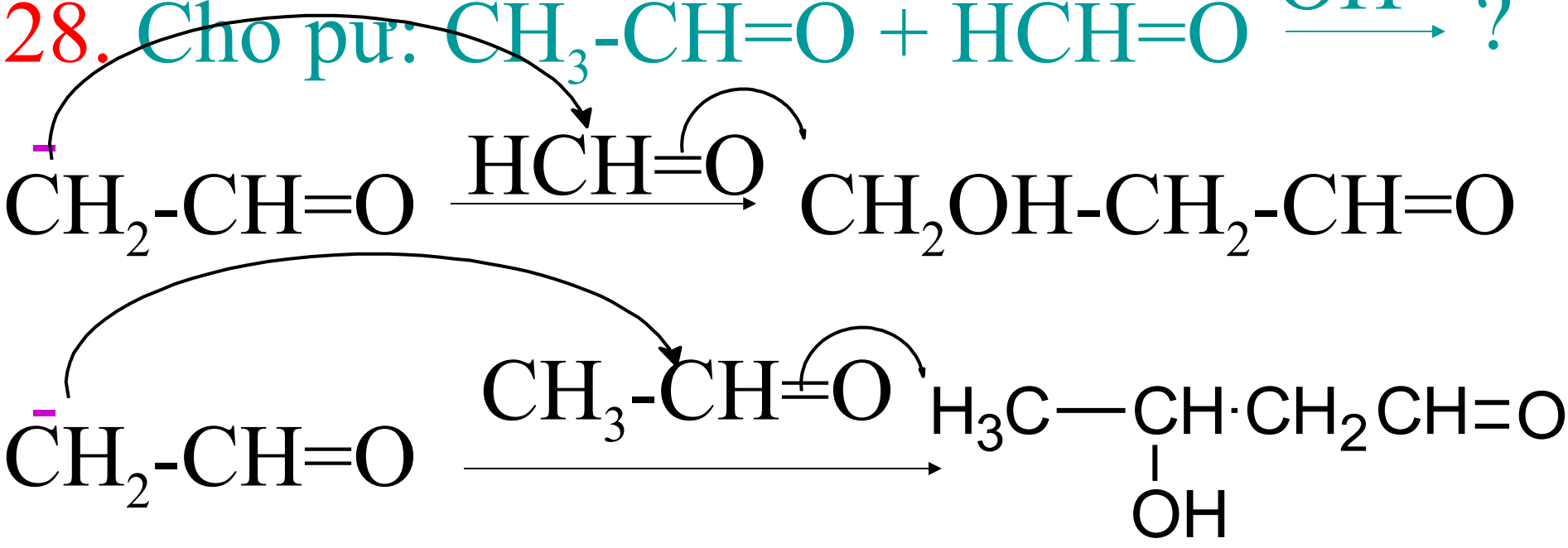
(c)

27. Sp chính của pư:



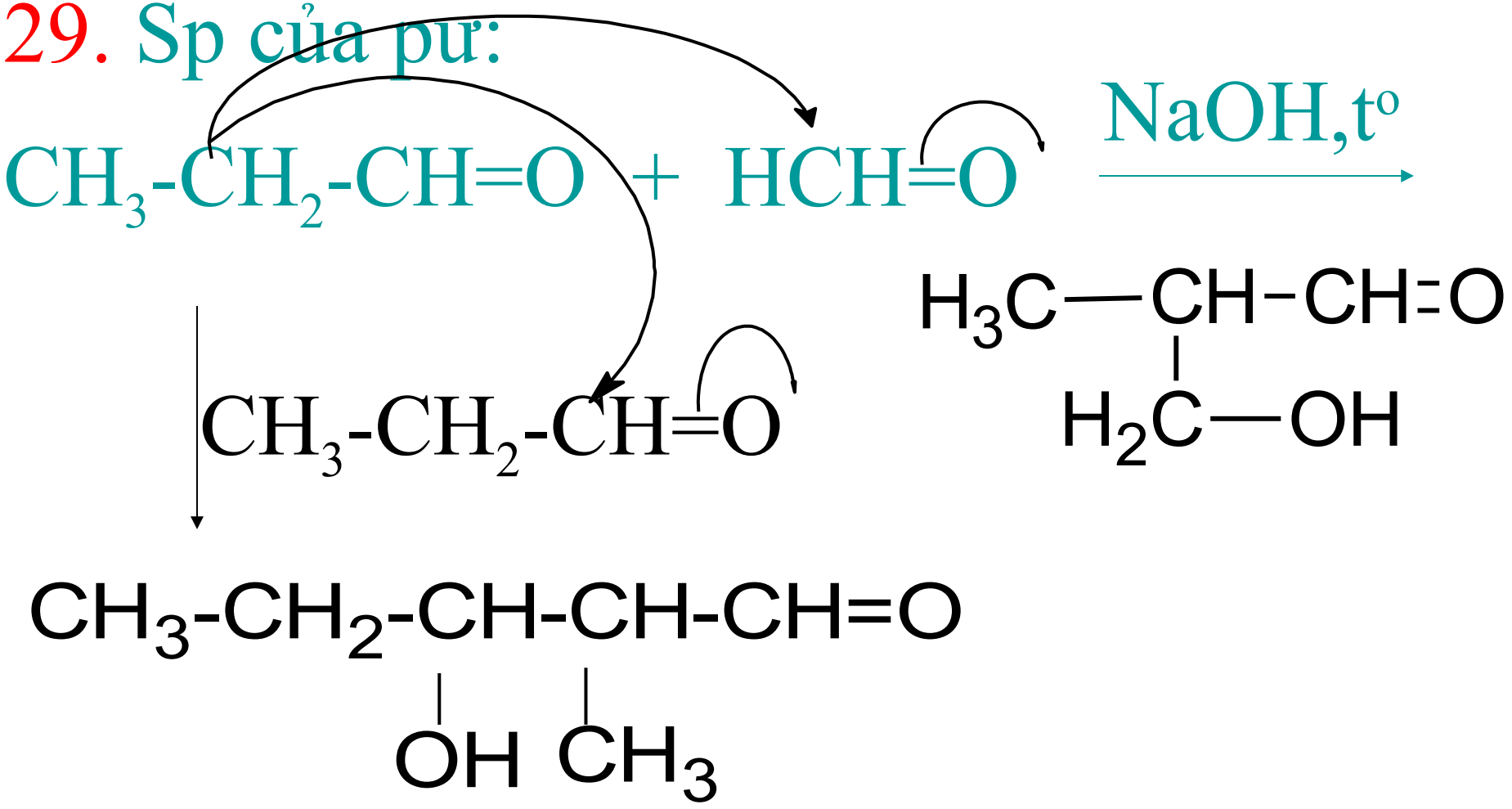
(a)

28. Cho pư: CH_3-CH=O + HCH=O $\xrightarrow{OH^-}$?



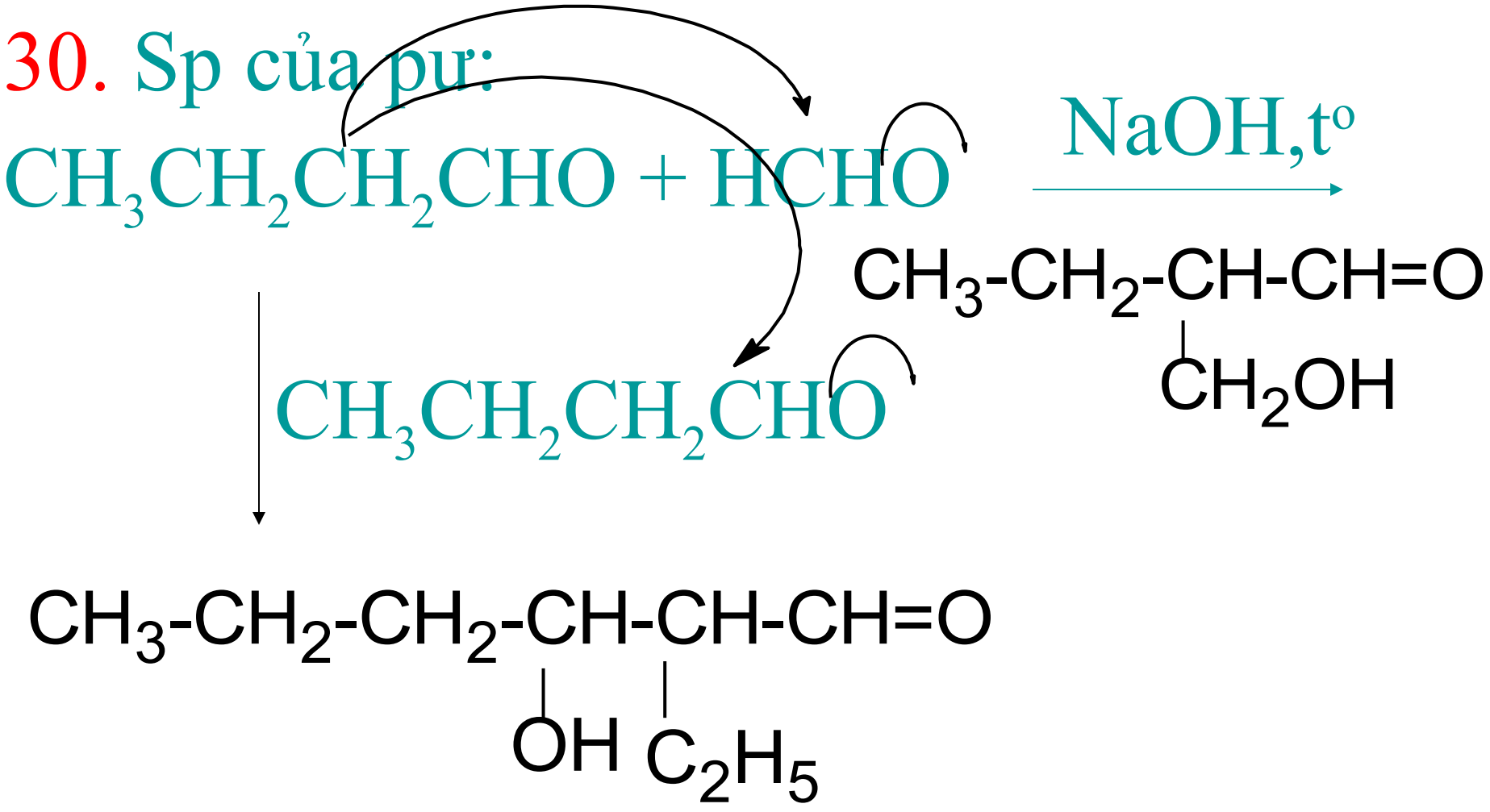
(d)

29. Sp của pư:


CH3-CH2-CH=O + HCH=O
NaOH,to
H3C—CH–CH=O
H2C—OH
CH3-CH2-CH=O
CH3-CH2-CH-CH-CH=O
OH CH3

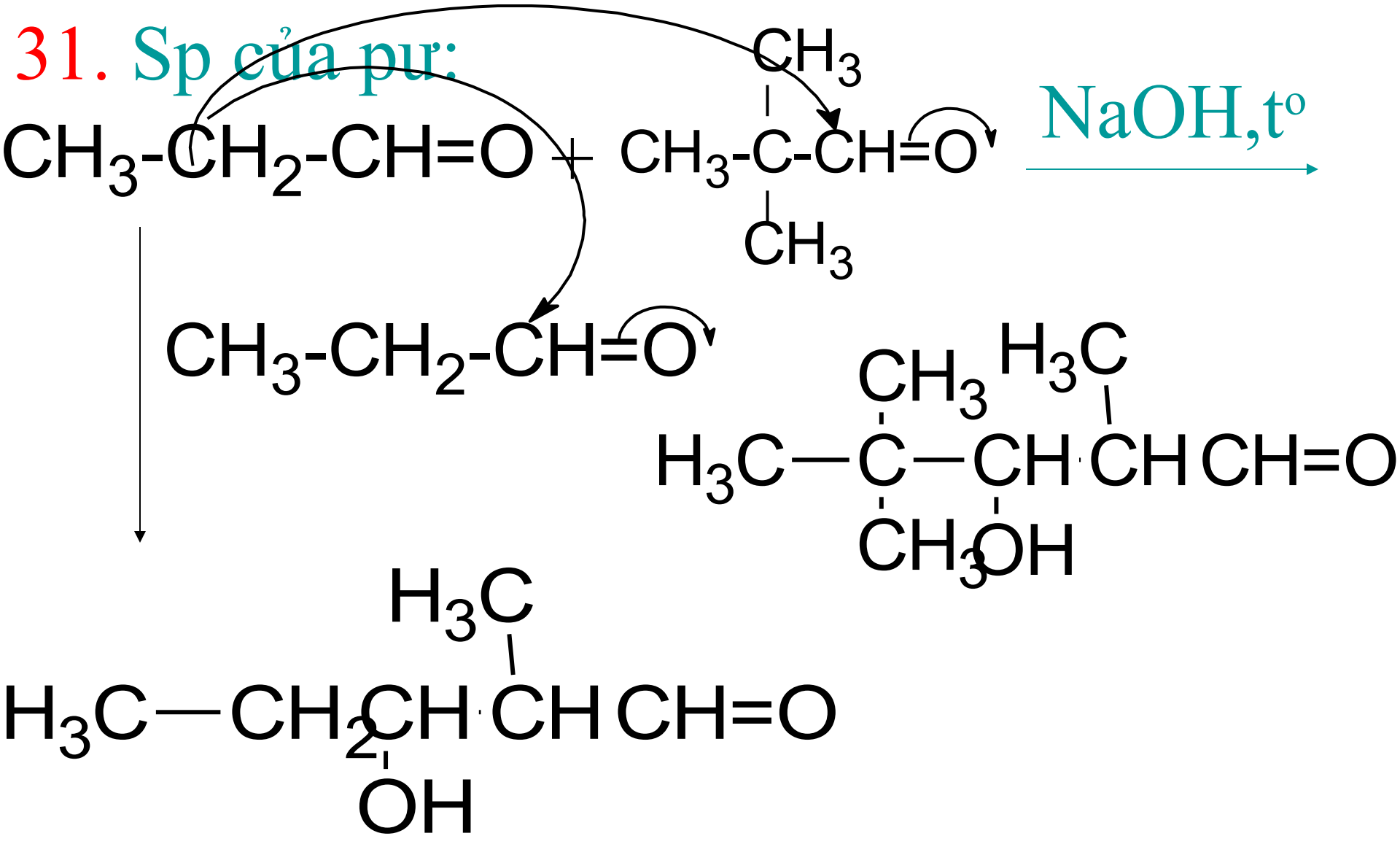
(d)

30. Sp của pư:


CH3CH2CH2CHO + HCHO
NaOH,to
CH3-CH2-CH-CH=O
CH2OH
CH3CH2CH2CHO
CH3-CH2-CH2-CH-CH-CH=O
OH
C2H5

(d)

31. Sp của pư:


CH3-CH2-CH=O + CH3-C(CH3)2-CH=O
NaOH,to
CH3-CH2-CH=O
H3C—C(CH3)(CH3OH)—CH(CH3)—CH=O
H3C—CH2—CH(OH)—CH(CH3)—CH=O

(d)

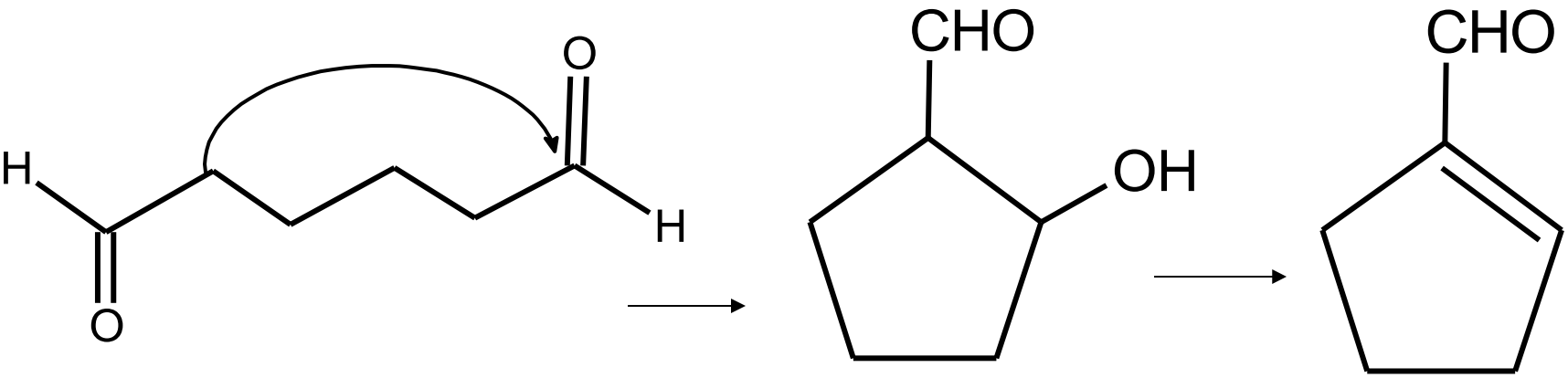
32. Sp chính pư chéo: Axetandehit + butanal

$CH_3\text{-}CH{=}O + CH_3\text{-}CH_2\text{-}CH_2\text{-}CH{=}O \longrightarrow$

$CH_3CH_2CH_2\overset{3}{C}HOH\overset{2}{C}H_2\overset{1}{C}HO$

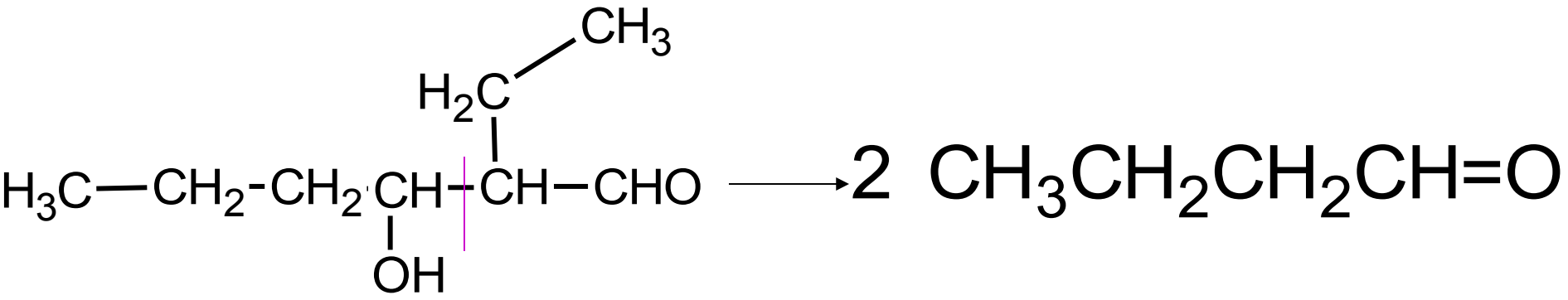
(d) 3-hidroxihexanal

33. Andol hóa nội phân tử, khử nước:



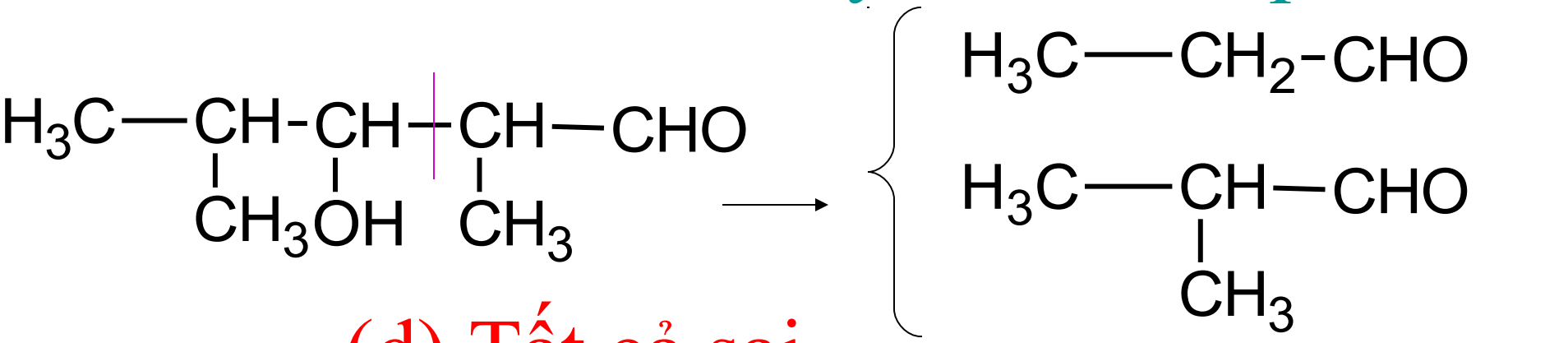
(c)

34. X andol hóa → 2-Etyl-3-hidroxihexanal



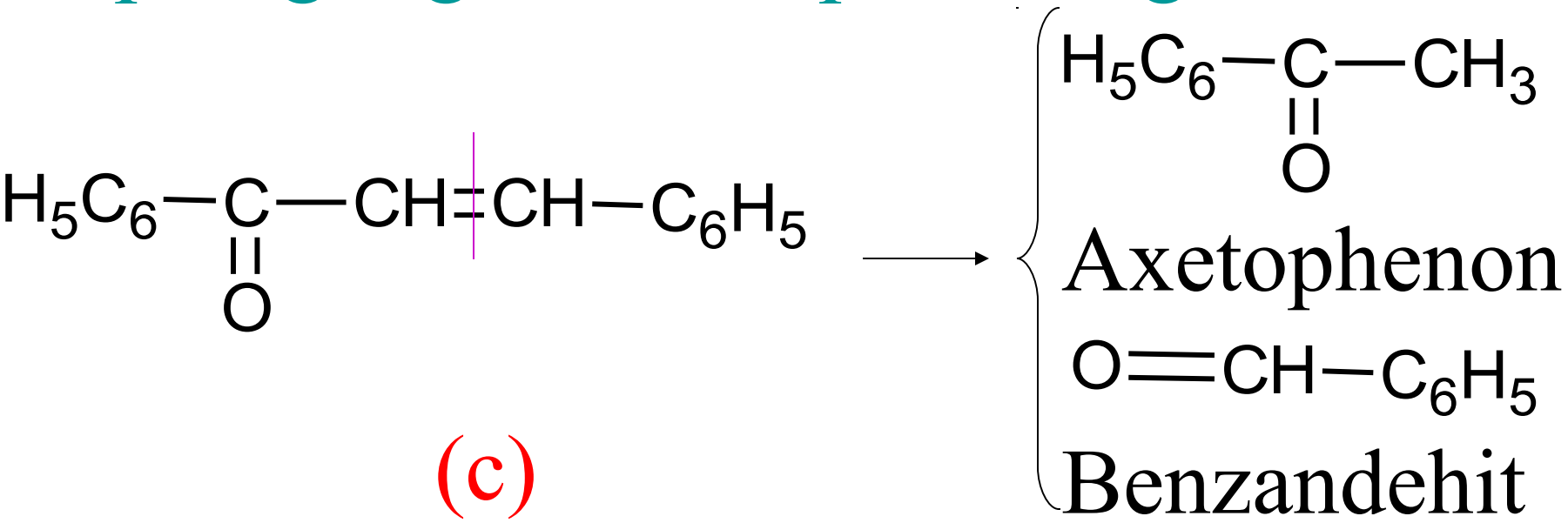
(a) Butyrandehit

35. X? Andol hóa→ 2,4-Dimetyl-3-hidroxipentanal

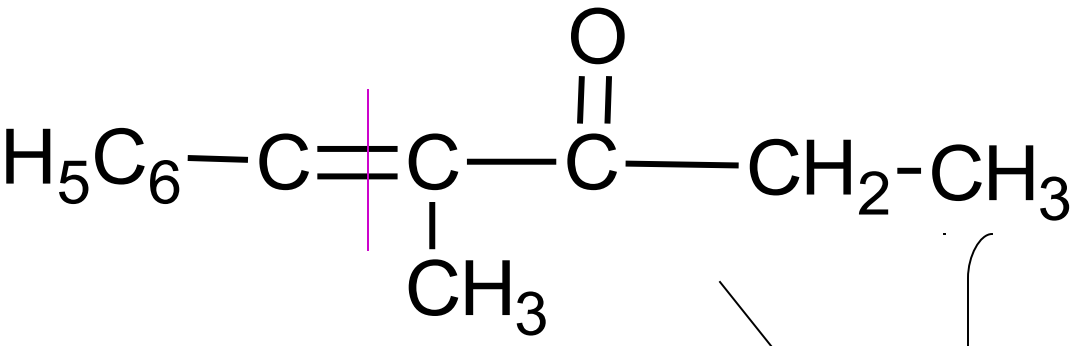


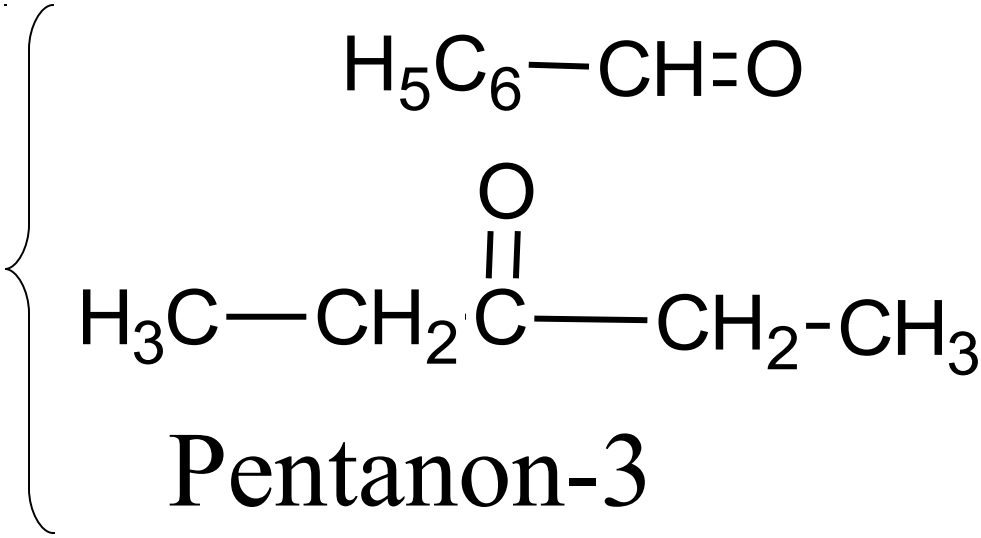
(d) Tất cả sai

36. Để điều chế 1,3-Diphenyl-2-propenon từ pư ngưng tụ andol phải dùng:



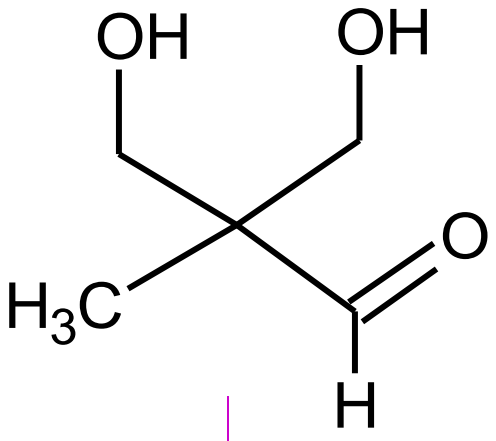
37.

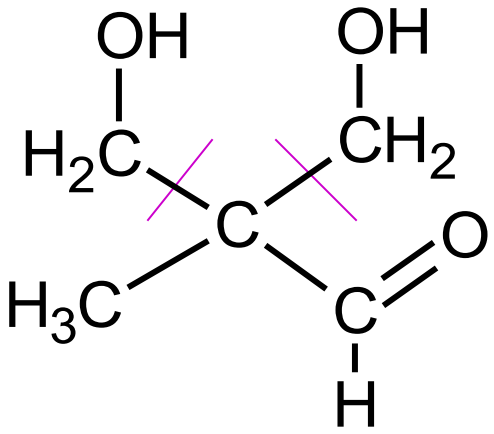




(a)

38.





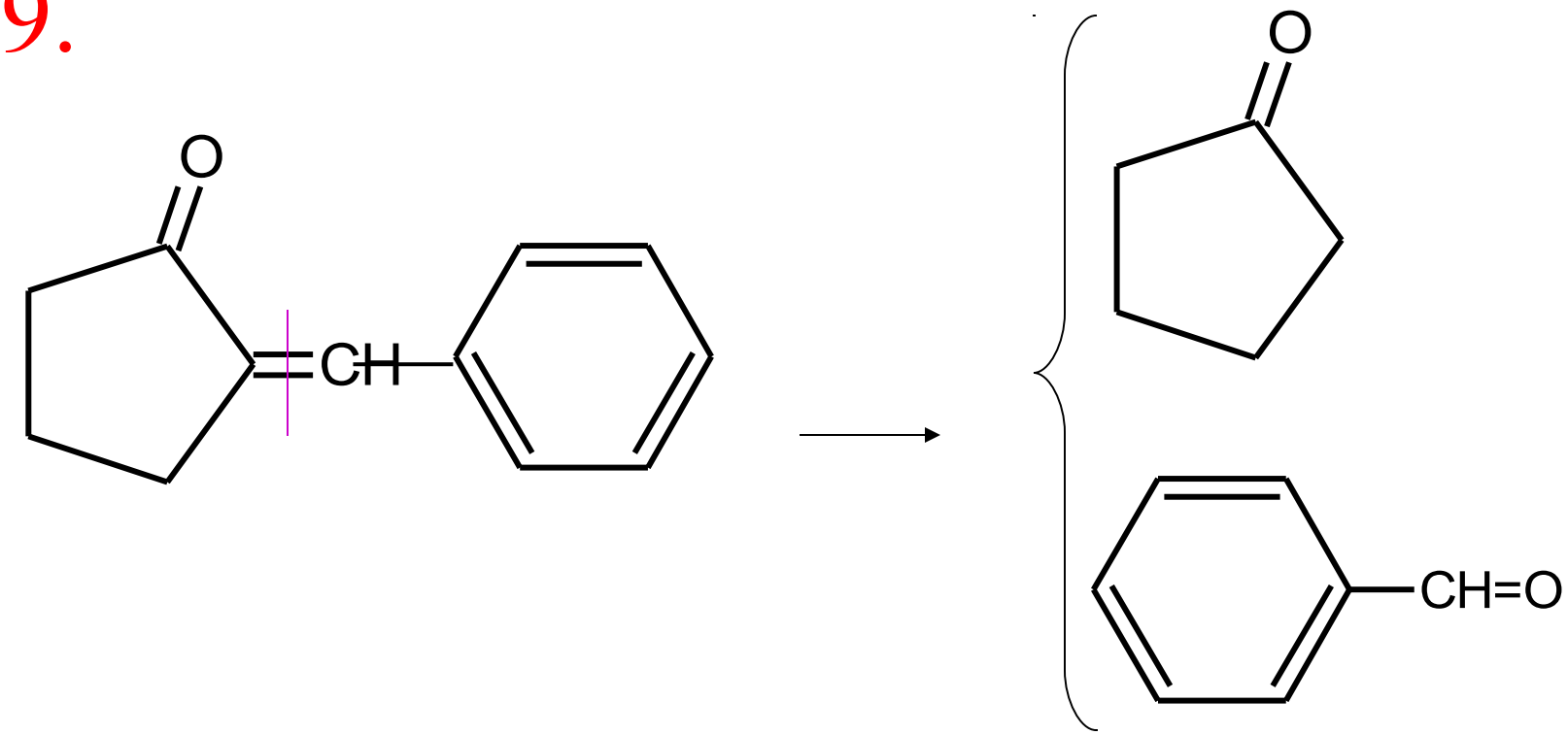
$HCH{=}O$

$HCH{=}O$

$CH_3\text{-}CH_2\text{-}CH{=}O$

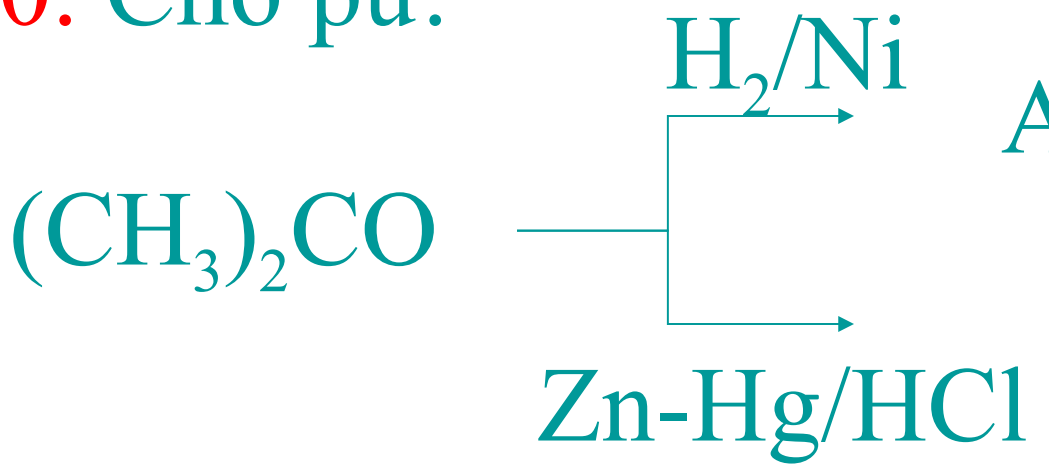
(c) Propanal + formandehit

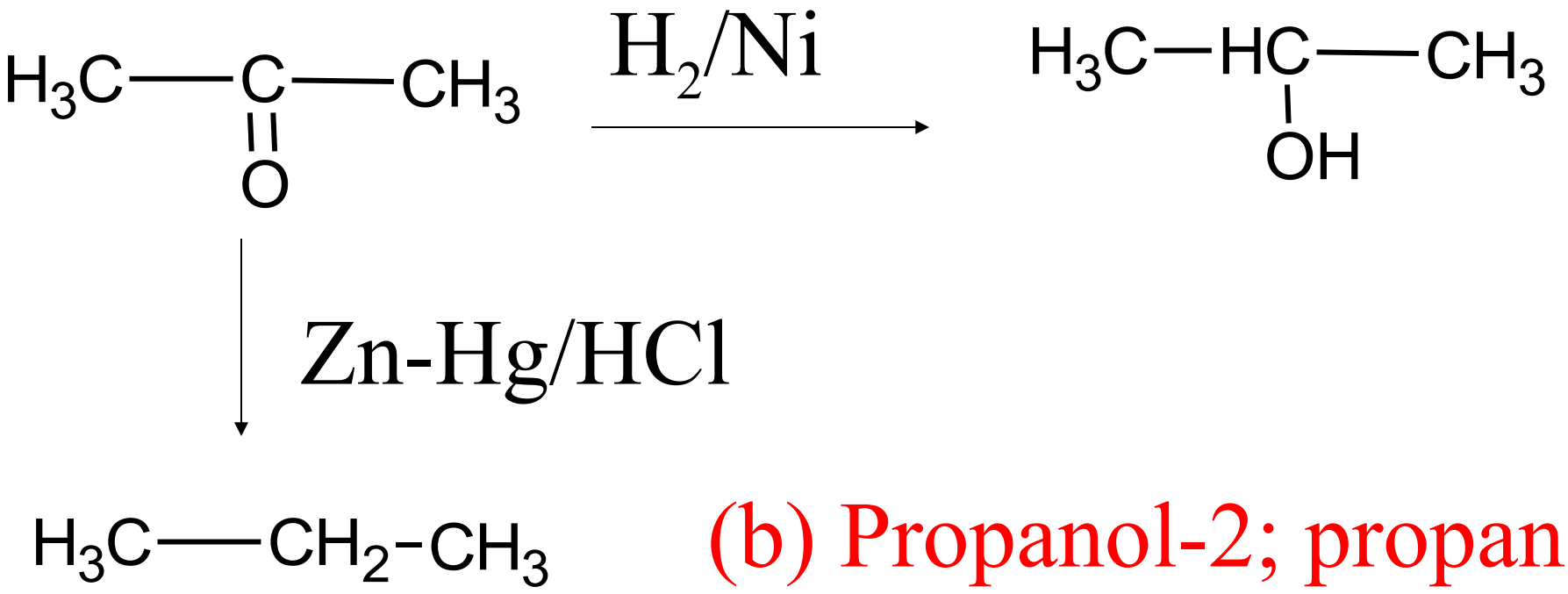
39.



(a) Xiclopentanon + Benzandehit

40. Cho pư:

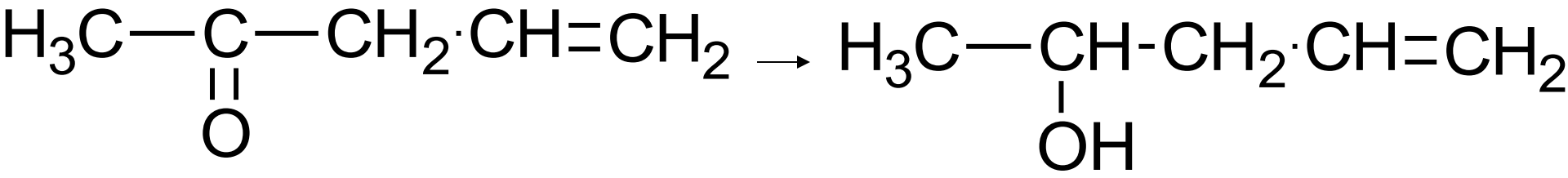




(b) Propanol-2; propan

41.

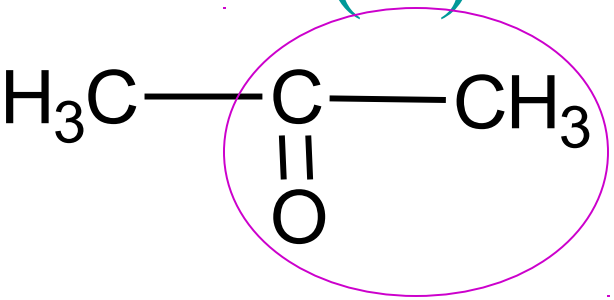
Metylalylceton $\xrightarrow[H_3O^+]{LiAlH_4}$ A?



(a) 4-Hidroxipenten-1

42. Chất cho phản ứng Haloform

Aceton(A)



Acetaldehit(B)

CH_3-CH=O

Propanol-1(C)

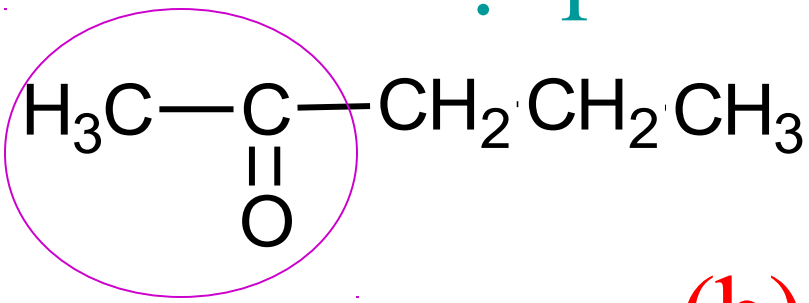
CH_3-CH_2-CH_2-OH

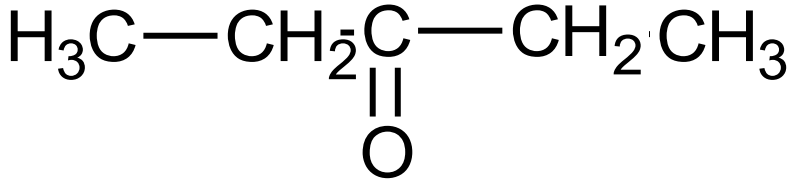
Propanal(D)

CH_3-CH_2-CH=O

(a) A và B

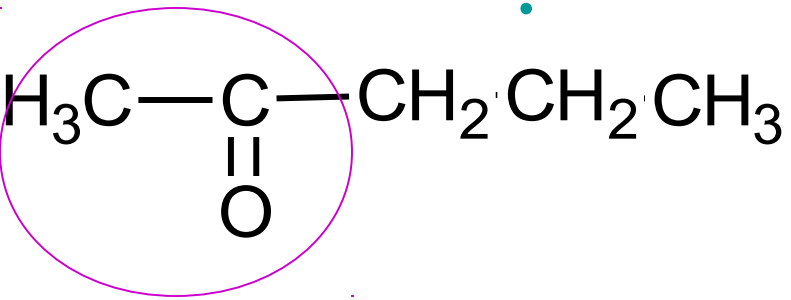
43. Phân biệt pentanon-2 và pentanon-3:

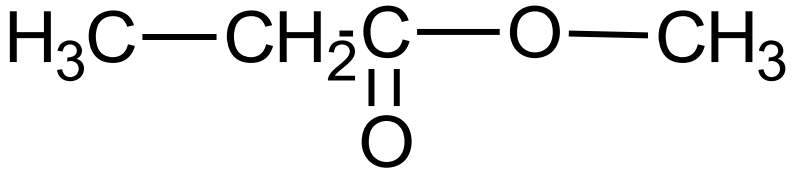




(b) I_2/NaOH

44. Phân biệt:

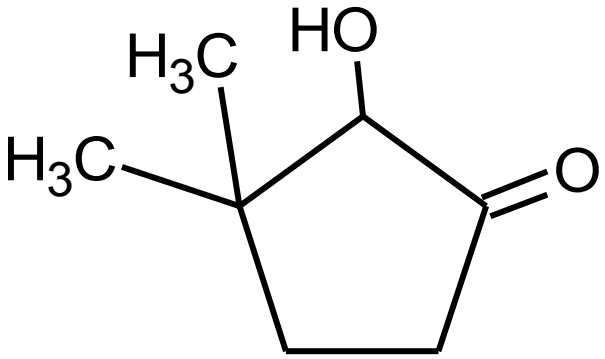




(c) I_2/NaOH

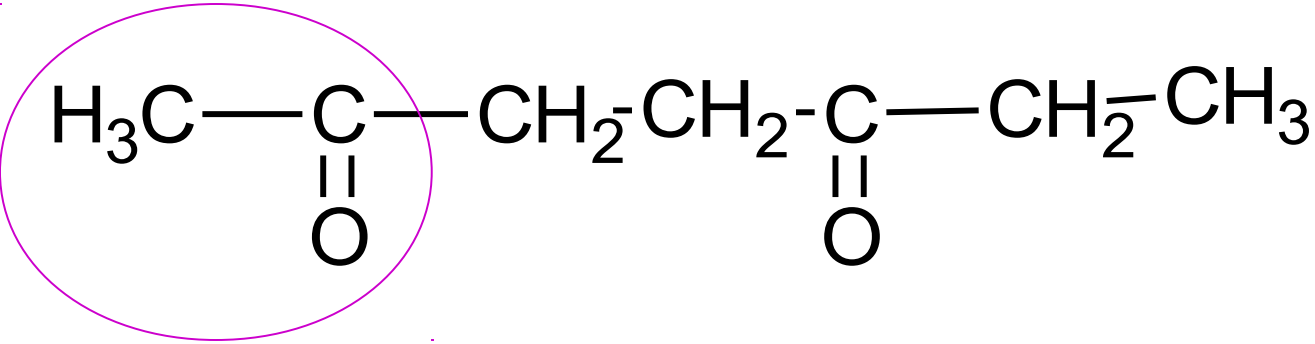
45. A($C_7H_{12}O_2$) cho pư với thuốc thử Tollens và pư iodoform. A là:

a. 2-Hidroxi-3,3-dimetylxiclopentanon



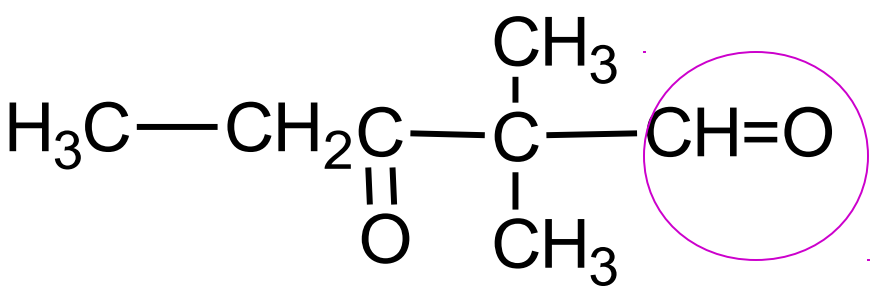
Không có nhóm:
-CH=O và CH_3-C=O

b. 2,5-heptandion



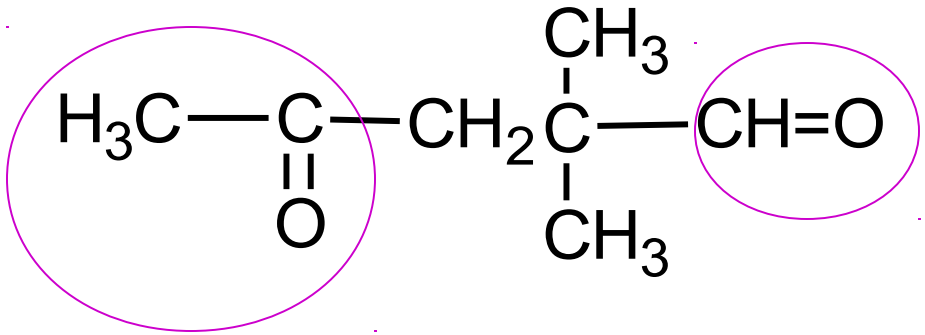
Không có nhóm –CH=O

c. 2,2-Dimetylpentadion-1,3



Không có nhóm: CH_3-C=O

d. 2,2-Dimetylpentadion-1,4



(d)

CHƯƠNG V:

AXIT CARBOXYLIC VÀ DẪN XUẤT

1. Tên gọi của: HOOC-CH_2-COOH; HOOC-$(CH_2)_2$-COOH;CH_3-CH=CH-COOH; CH_3-CH(OH)-COOH lần lượt là:

a. Axit propandioic; axit butandioic; axit butenoic; axit lactic

b. Axit propandioic; axit butandioic; axit 2-butenoic; axit lactic

c. Axit Malonic; axit succinic; axit crotonic; axit hidroxipropanoic

d. b, c đều đúng.

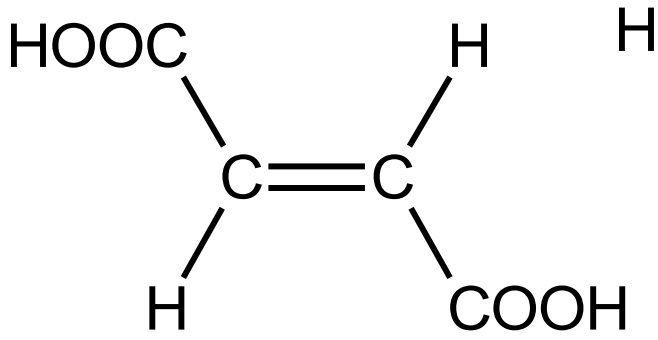
Câu b

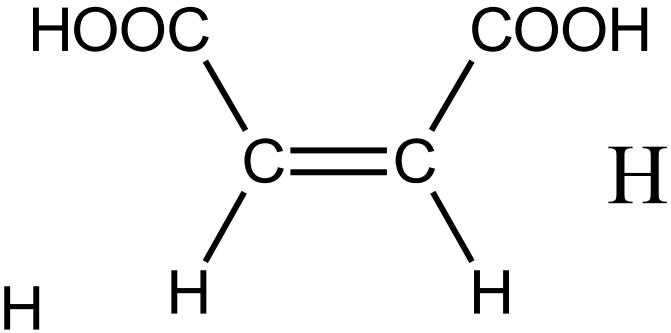
2. Tên gọi của: CH_3-$(CH_2)_3$-COOH;

$HOOC(CH_2)_3COOH$;$HOOC(CH_2)_4COOH$

(a) Axit valeric; axit glutaric; axit adipic

3. Tên gọi của:

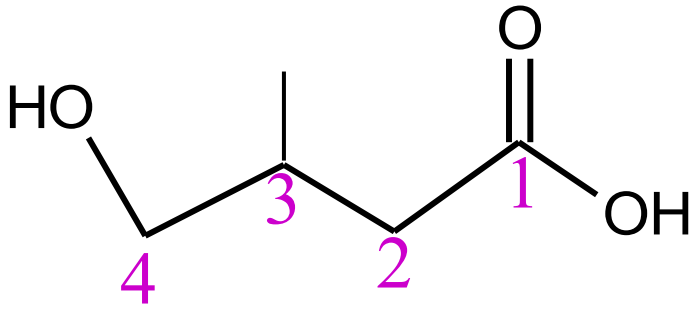




$HOOC$-CH_2-$COOH$

(b) Axit fumaric; axit maleic; axit malonic

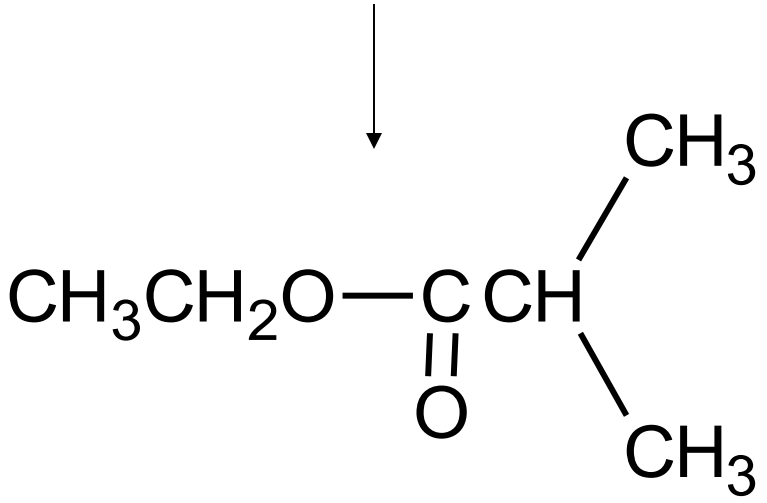
4. Tên quốc tế của:



(a) Axit 4-hidroxy-3-metylbutanoic

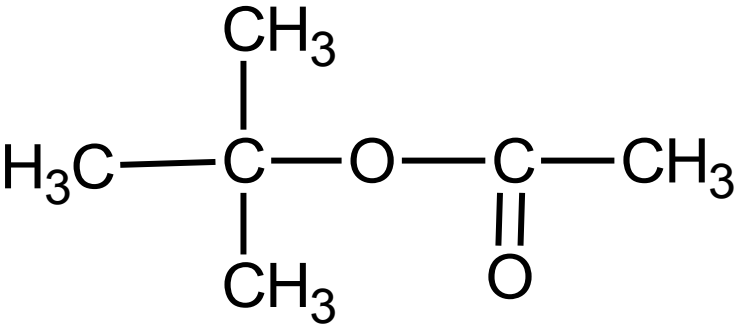
5. Hợp chất đọc tên không đúng:

a. isopropylpropanoat $C_2H_5OOCCH(CH_3)_2$



Gọi tên sai

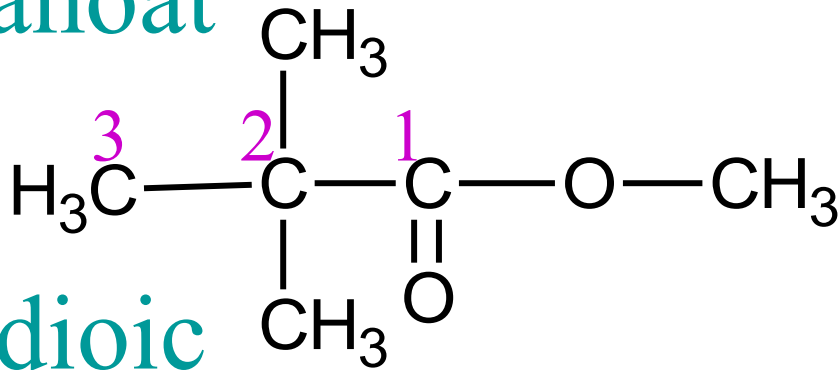
b. tert-butylaxetat $(CH_3)_3COCOCH_3$



đúng

$(CH_3)_3CCO_2CH_3$

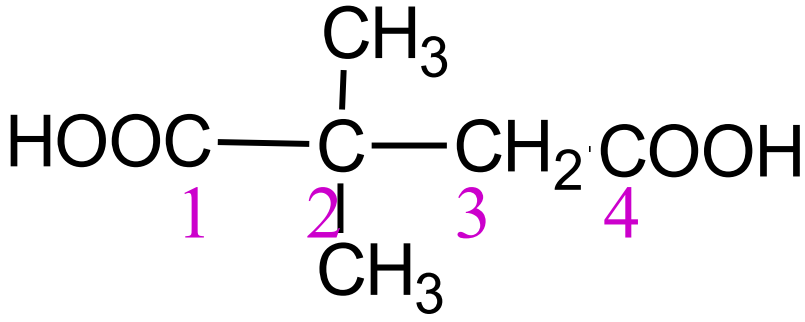
c.Metyl 2,2-dimetylpropanoat



đúng

d. Axit 2,2-dimetylbutandioic

$HO_2CC(CH_3)_2CH_2CO_2H$



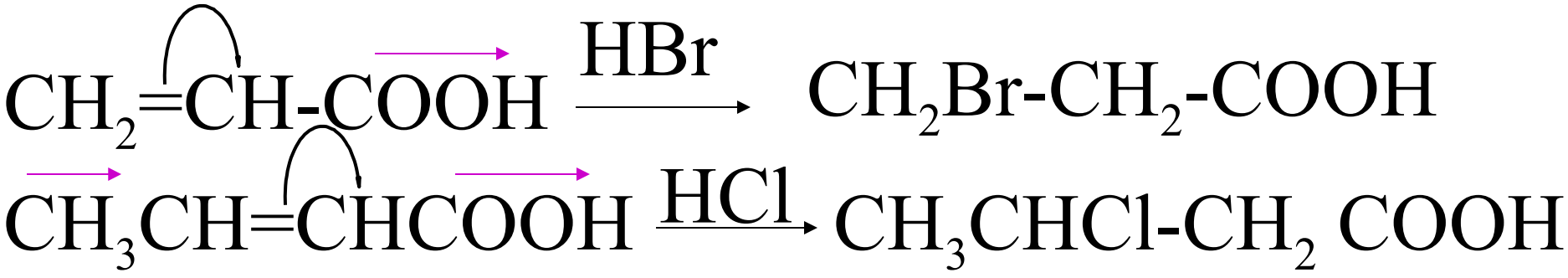
đúng

Câu (a)

6. Thực hiện pư:

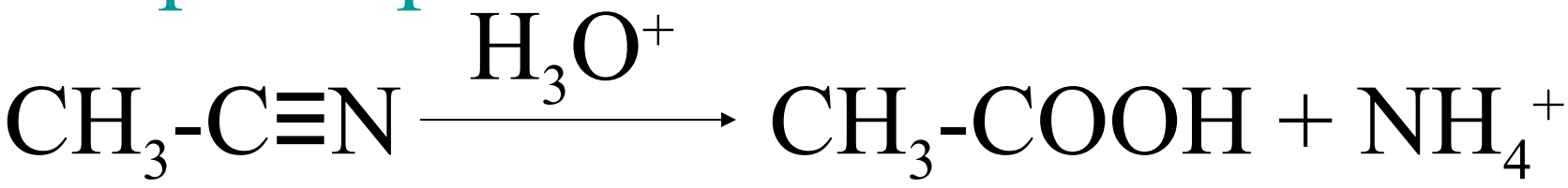
Axit Acrilic + HBr → A ?

Axit Crotonic + HCl → B ?



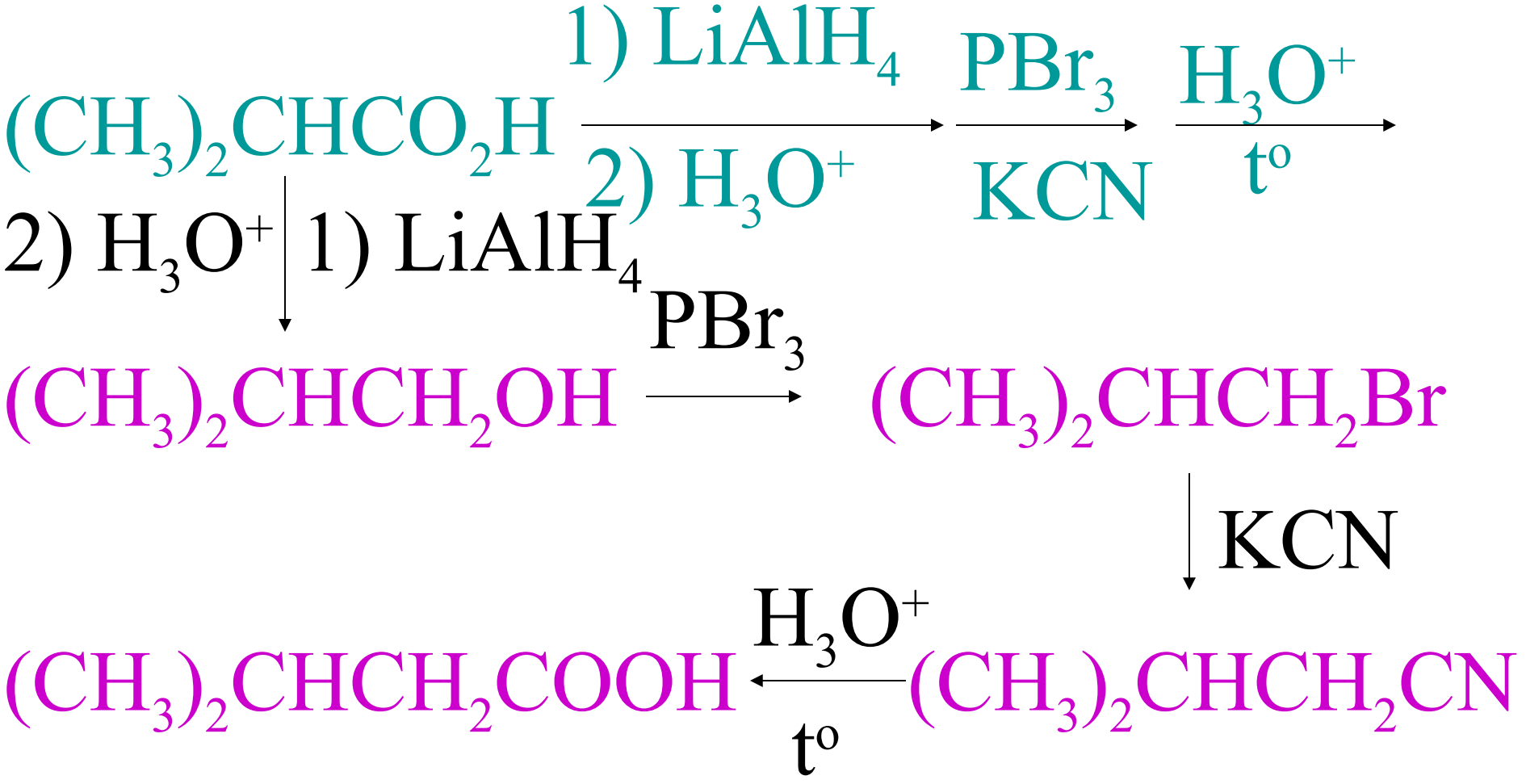
Câu (a)

7. Sp của pư:



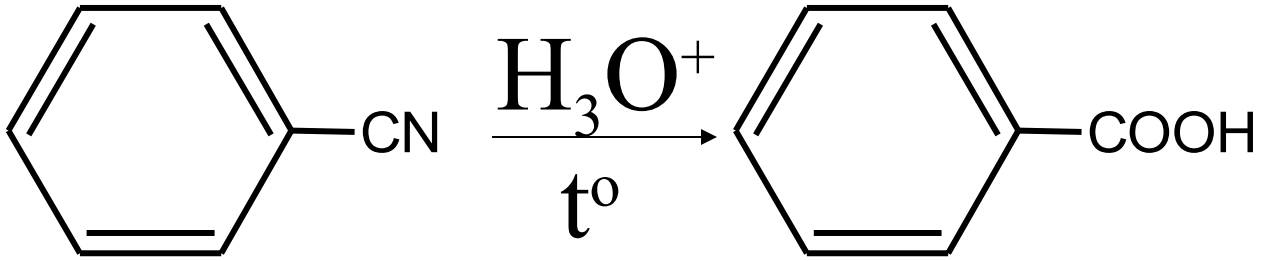
Câu (c)

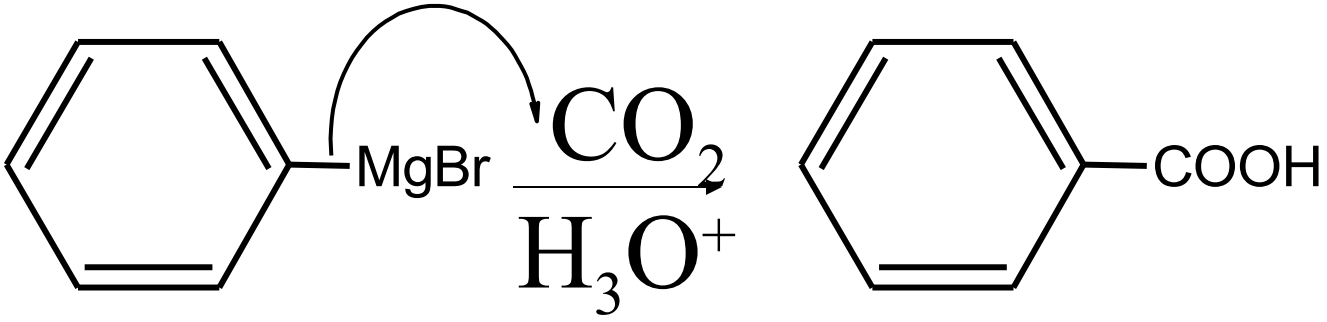
8. Sp của chuỗi pư:

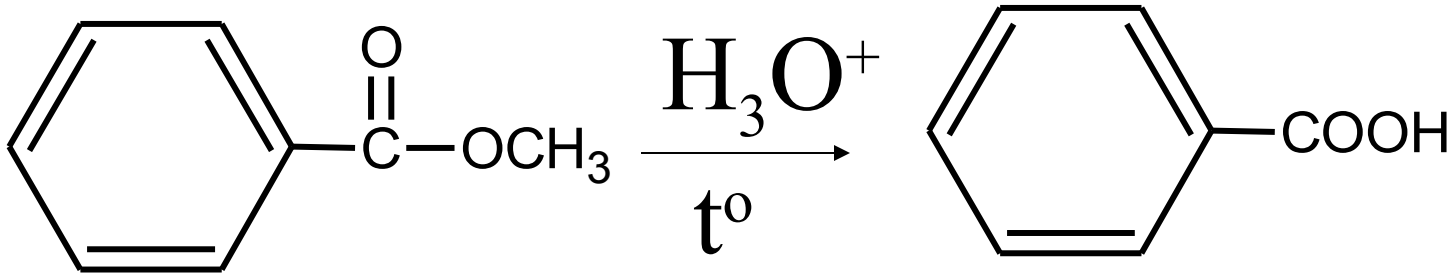


(d)

9. Pư nào → axit benzoic ?

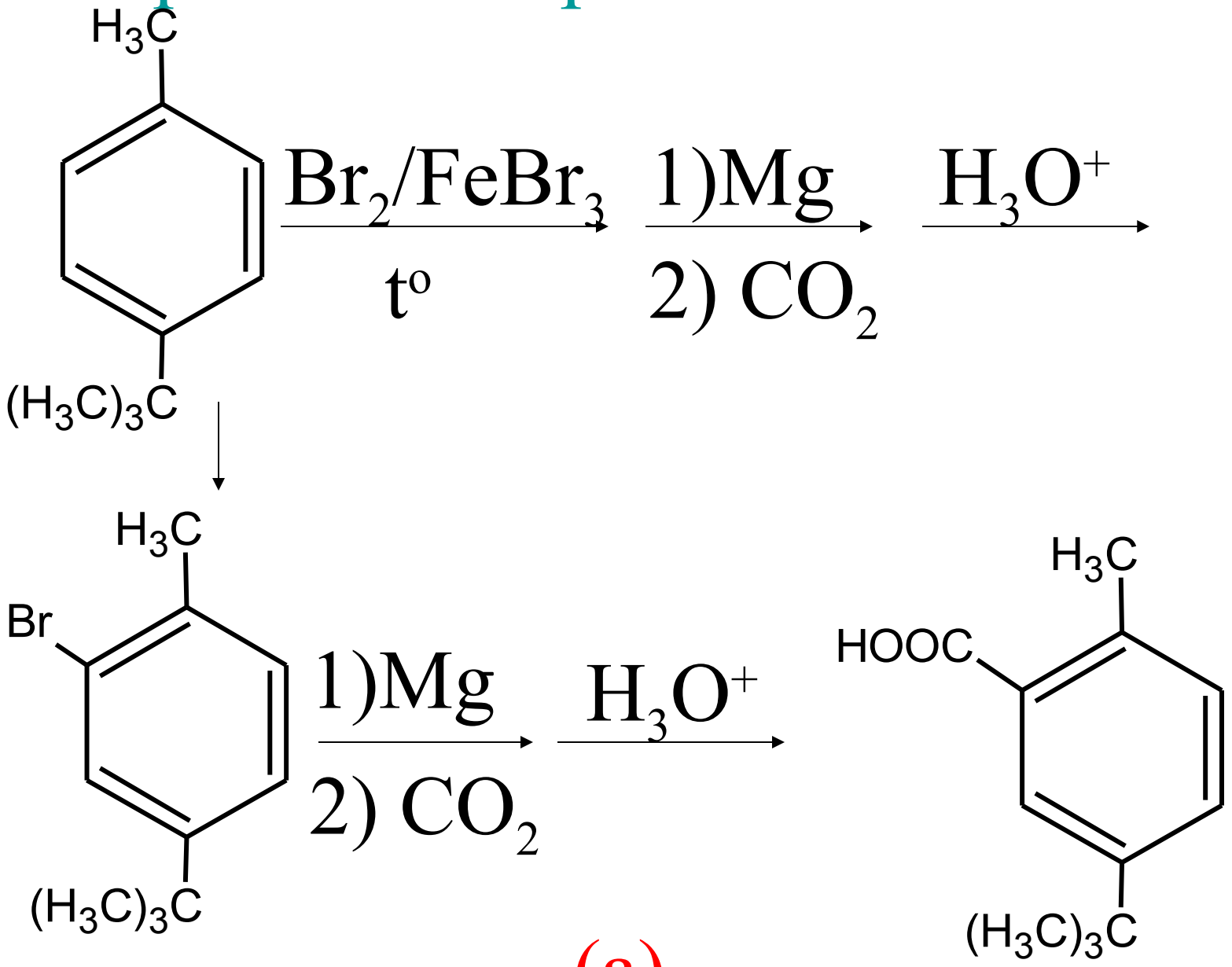
a. 

b 

c. 

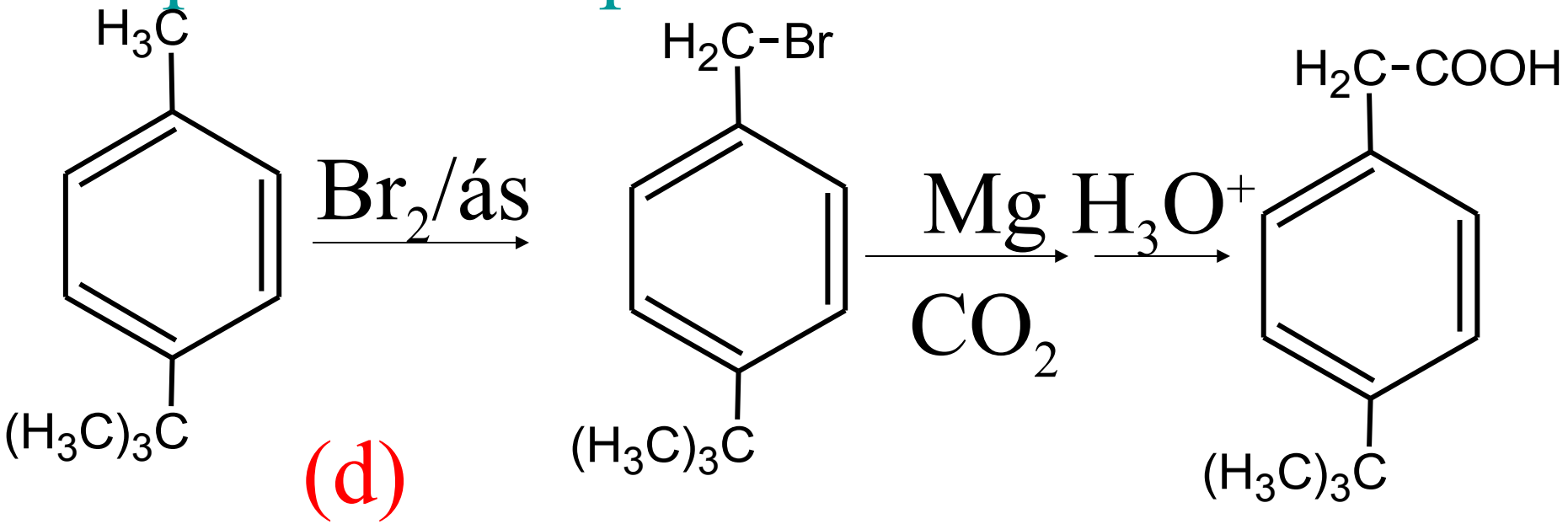
d. Tất cả đều đúng (d)

10. Sp của chuỗi pư:



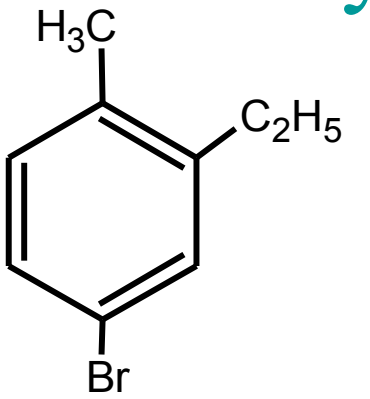
(a)

11. Sp của chuỗi pư:

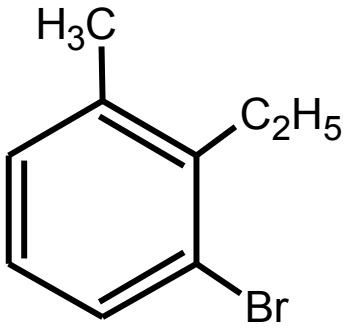


(d)

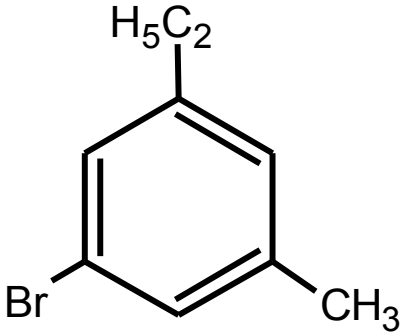
12. 2 đồng phân A,B($C_9H_{11}Br$) $\xrightarrow{\text{Grignard}}$ 2 axit carboxylic C,D $\xrightarrow{KMnO_4đđ}$ 1 axit tricarboxylic E. A và B là:



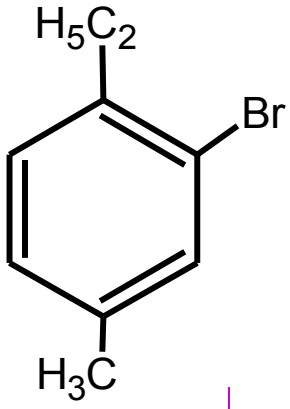
(I)



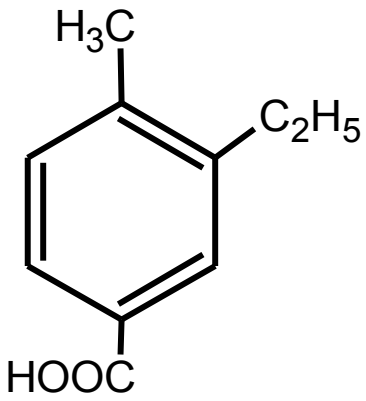
(II)

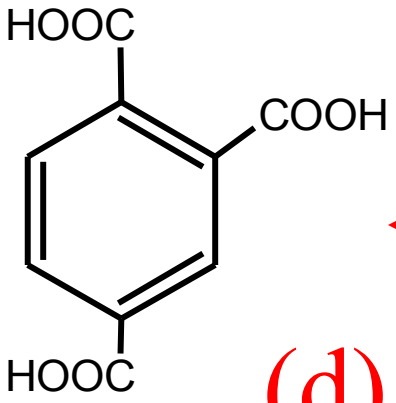


(III)

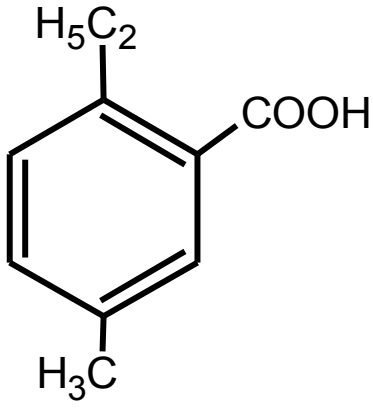


(IV)

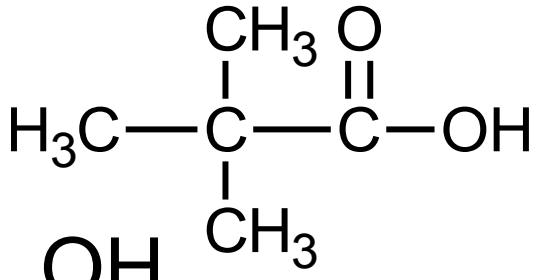




(d)



13. Chuỗi pư nào dùng để điều chế:



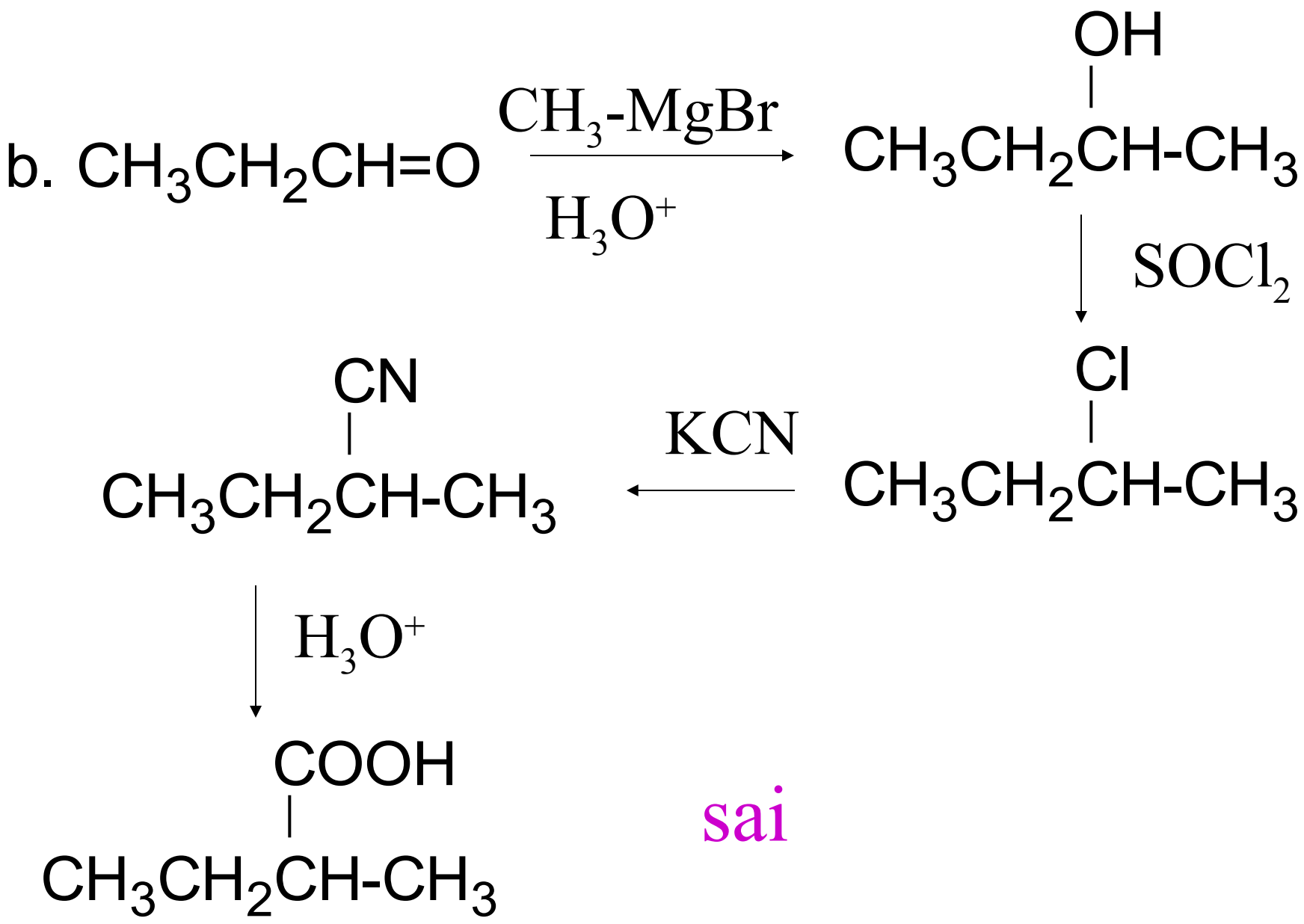
a. $CH_3CH_2CH{=}O \xrightarrow{CH_3\text{-}MgBr} CH_3CH_2\underset{\displaystyle OH}{\underset{|}{C}}H\text{-}CH_3$

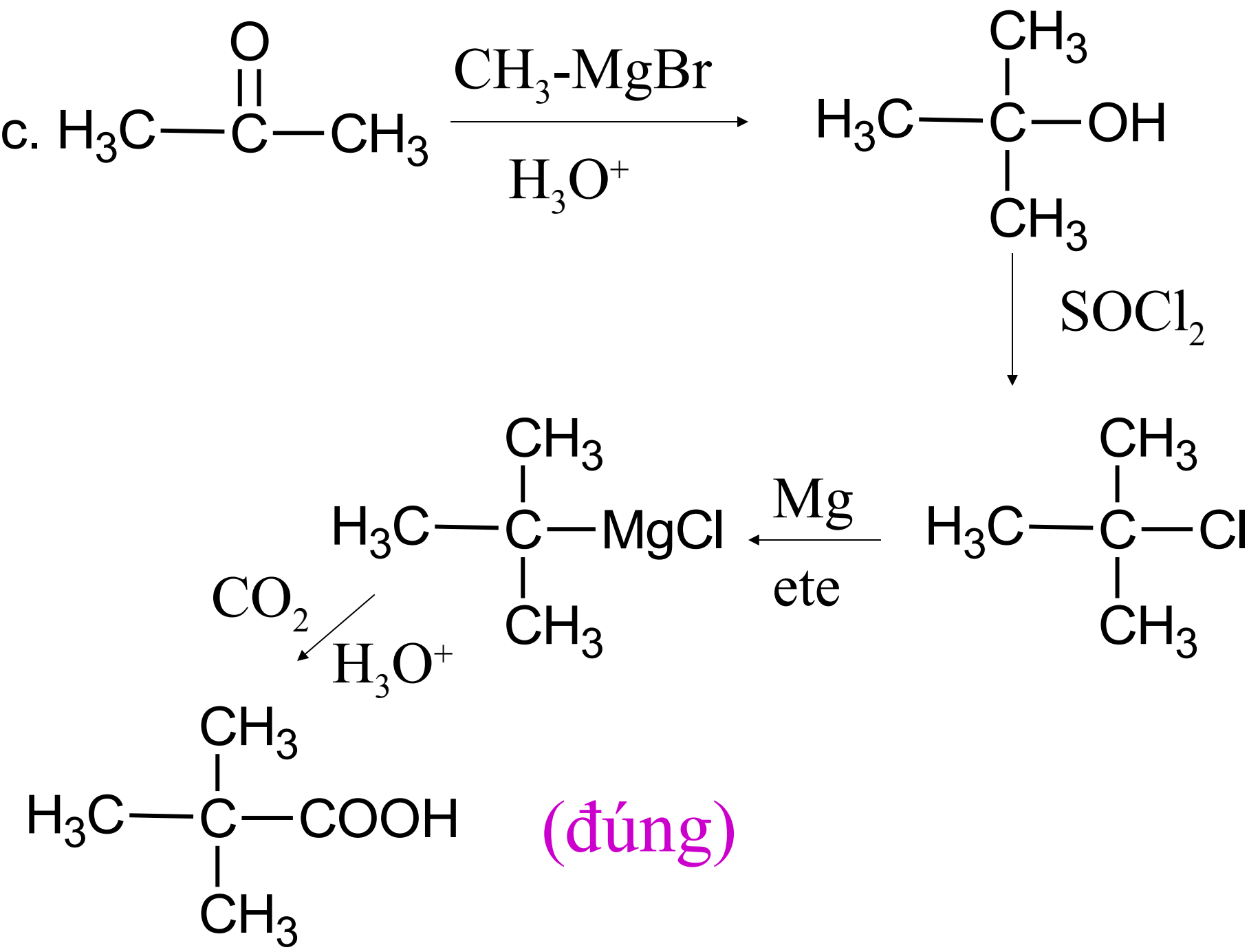
sai

$CH_3CH_2\underset{\displaystyle OH}{\underset{|}{C}}H\text{-}CH_3 \xrightarrow{SOCl_2} CH_3CH_2\underset{\displaystyle Cl}{\underset{|}{C}}H\text{-}CH_3$

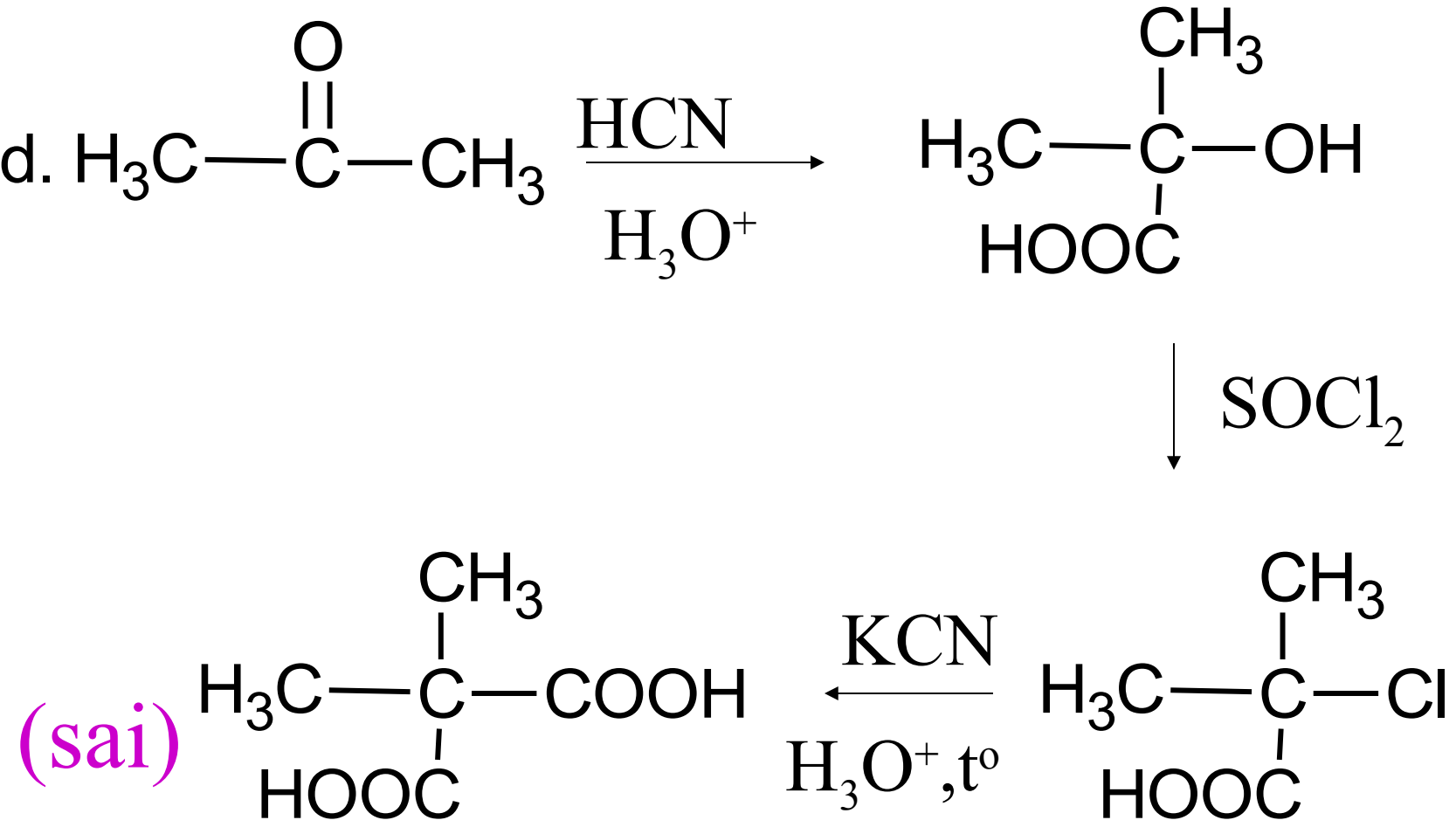
Không pư

$CH_3CH_2\underset{\displaystyle Cl}{\underset{|}{C}}H\text{-}CH_3 \xrightarrow{CO_2}$


b. CH3CH2CH=O
CH3-MgBr
H3O+
OH
CH3CH2CH-CH3
SOCl2
Cl
CH3CH2CH-CH3
KCN
CN
CH3CH2CH-CH3
H3O+
COOH
CH3CH2CH-CH3
sai

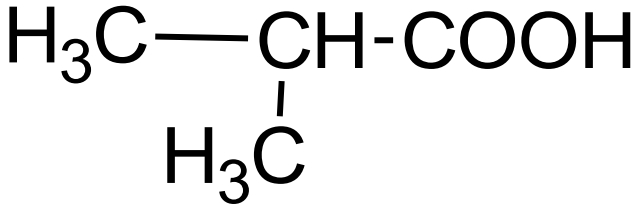

c.
O
H3C—C—CH3
CH3-MgBr
H3O+
CH3
H3C—C—OH
CH3
SOCl2
CH3
H3C—C—Cl
CH3
Mg
ete
CH3
H3C—C—MgCl
CH3
CO2
H3O+
CH3
H3C—C—COOH
CH3

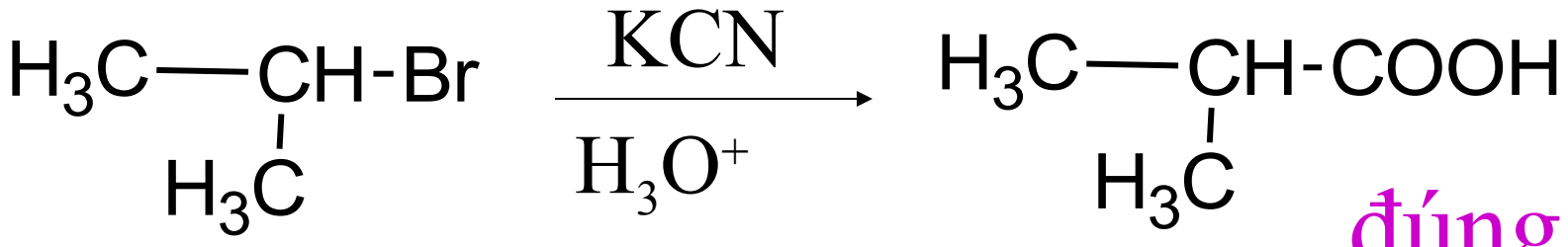
(đúng)

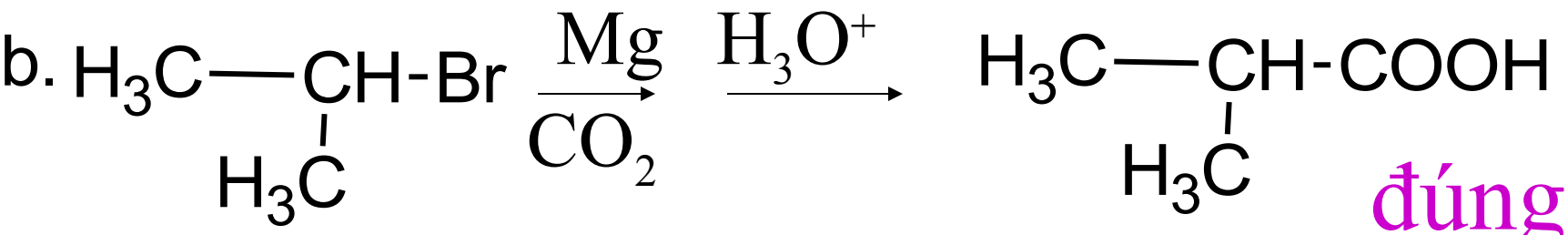


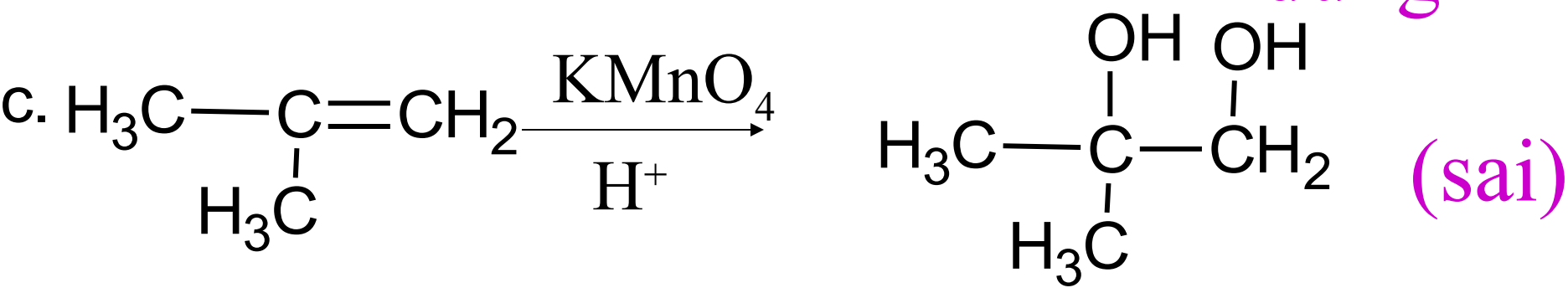
(c)

14. Chuỗi pư để điều chế:



a. 

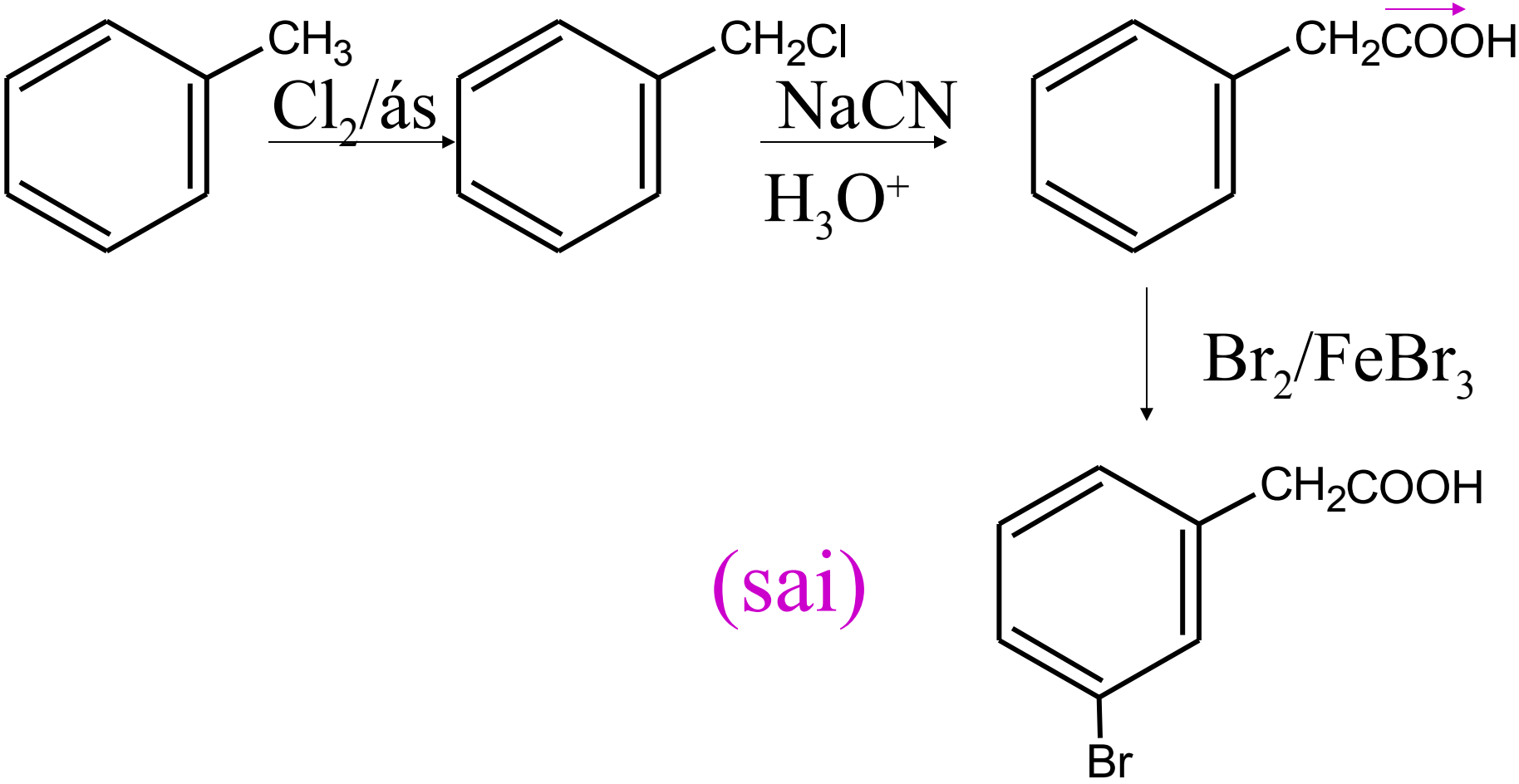
b. 

c. 

(d) a,b đều đúng

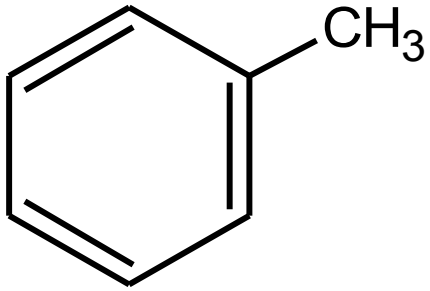
15. Từ toluen → axit p-bromphenylaxetic

a.

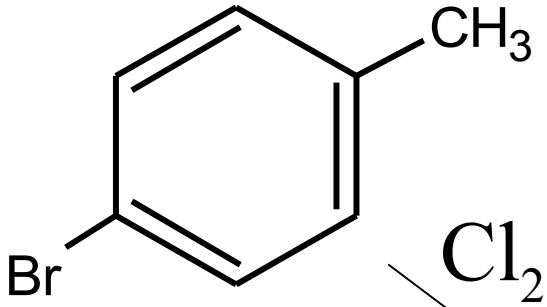


(sai)

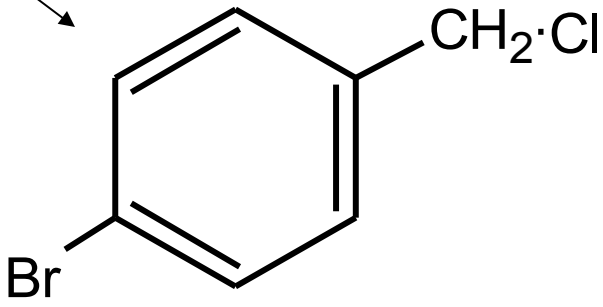
b.



$Br_2/FeBr_3$

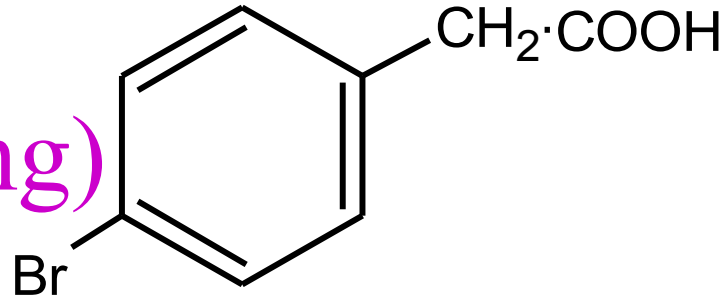


Cl_2.ás



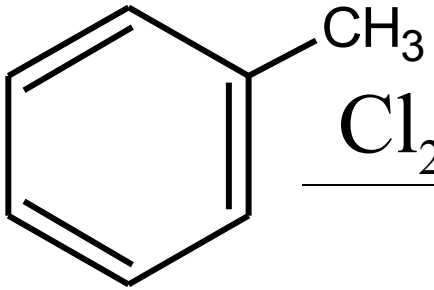
Mg/ete

CO_2, H_3O^+

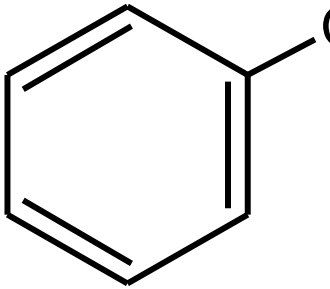


(đúng)

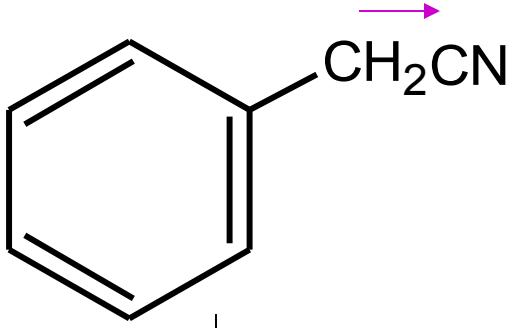
c.



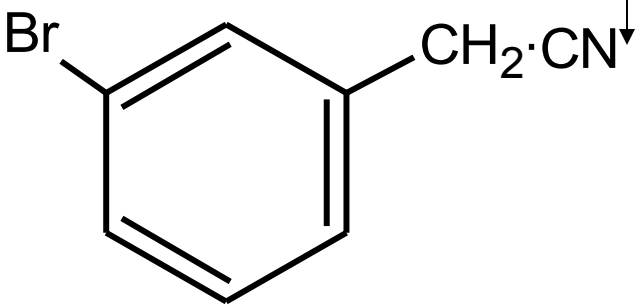
Cl_2.ás



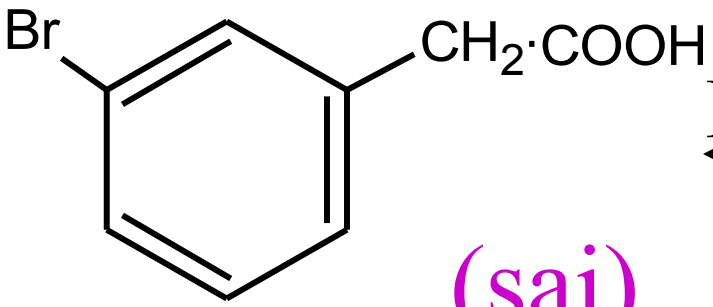
NaCN



$Br_2/FeBr_3$

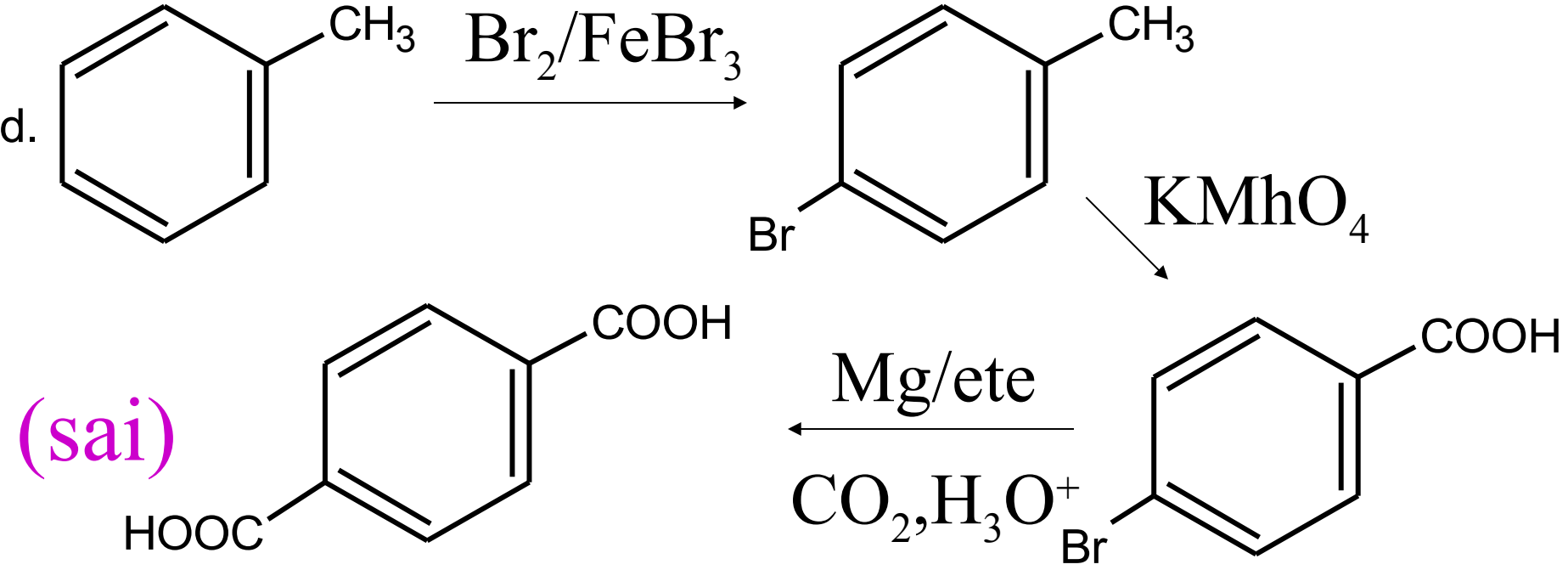


H_3O^+



(sai)

d.



(sai)

(b)

16. Thực hiện pư:

$$2\ CH_2(COOC_2H_5)_2 \xrightarrow[CH_2I_2]{C_2H_5ONa} (H_5C_2OCO)_2CH\text{-}CH_2\text{-}CH(COOC_2H_5)_2$$

$$\downarrow\ H_3O^+, t^o$$

$$HOOC\text{-}CH_2\text{-}CH_2\text{-}CH_2\text{-}COOH$$

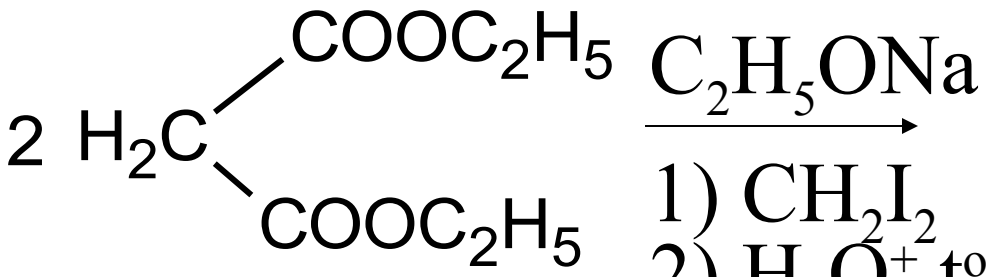
$$\downarrow$$

(b) $HOOC\text{-}(CH_2)_3\text{-}COOH$

17.Thực hiện pư:

$$CH_2(COOC_2H_5)_2 \xrightarrow[C_2H_5Br]{EtONa} CH_3CH_2\text{-}CH(COOC_2H_5)_2 \ (A) \xrightarrow{H_3O^+,t^o} CH_3CH_2CH_2\text{-}COOH \ (B) \quad (d)$$

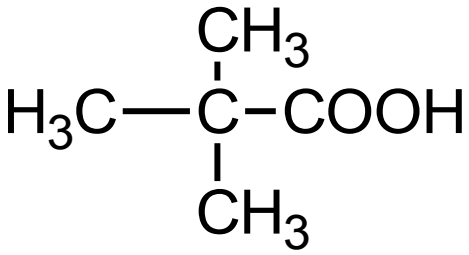
18, bổ túc chuỗi pư:



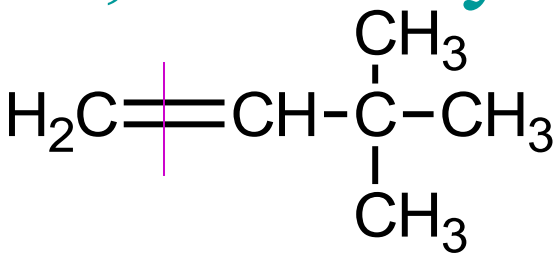
$$HOOC\text{-}(CH_2)_3\text{-}COOH$$

(c)

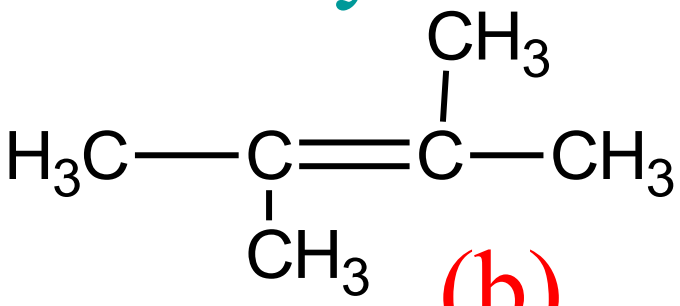
19. Chất không thể chuyển hóa thành axit 2,2-Dimetylpropanoic qua 2 bước hoặc ít hơn



a.3,3-dimetylbuten-1 b. 2,3-dimetylbuten-2

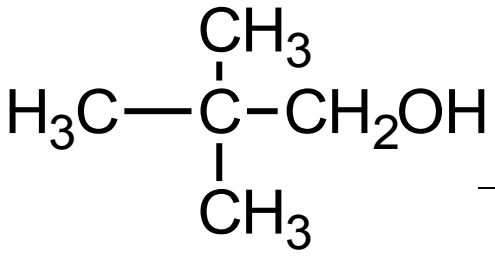


$KMnO_4đ$



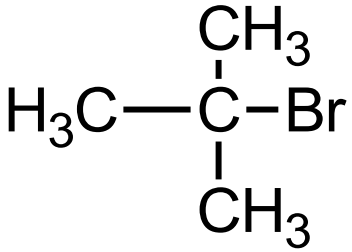
(b)

c. 2,2-dimetylpropanol-1



H_2CrO_4

d. 2-brom-2-metylpropan



Mg/ete

CO_2, H_3O^+

20. Tính axit tăng dần ?

(I) Axit adipic $HOOC(CH_2)_4COOH$

(II) Axit malonic $HOOCCH_2COOH$

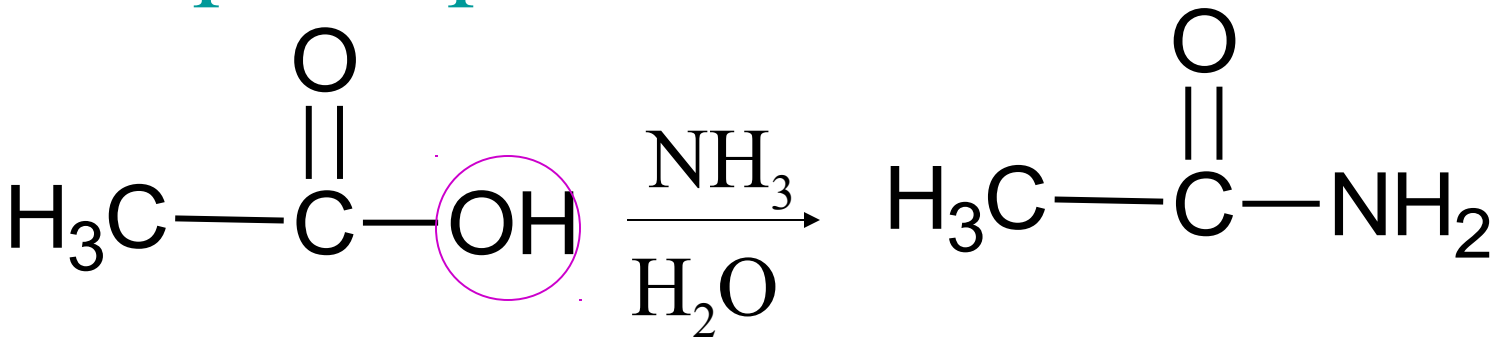
(III) Axit oxalic $HOOC\text{-}COOH$

(IV) Axit succinic $HOOC\text{-}(CH_2)_2\text{-}COOH$

$HOOC\text{-}(CH)_n\text{-}COOH$: n↑ => tính axit ↓

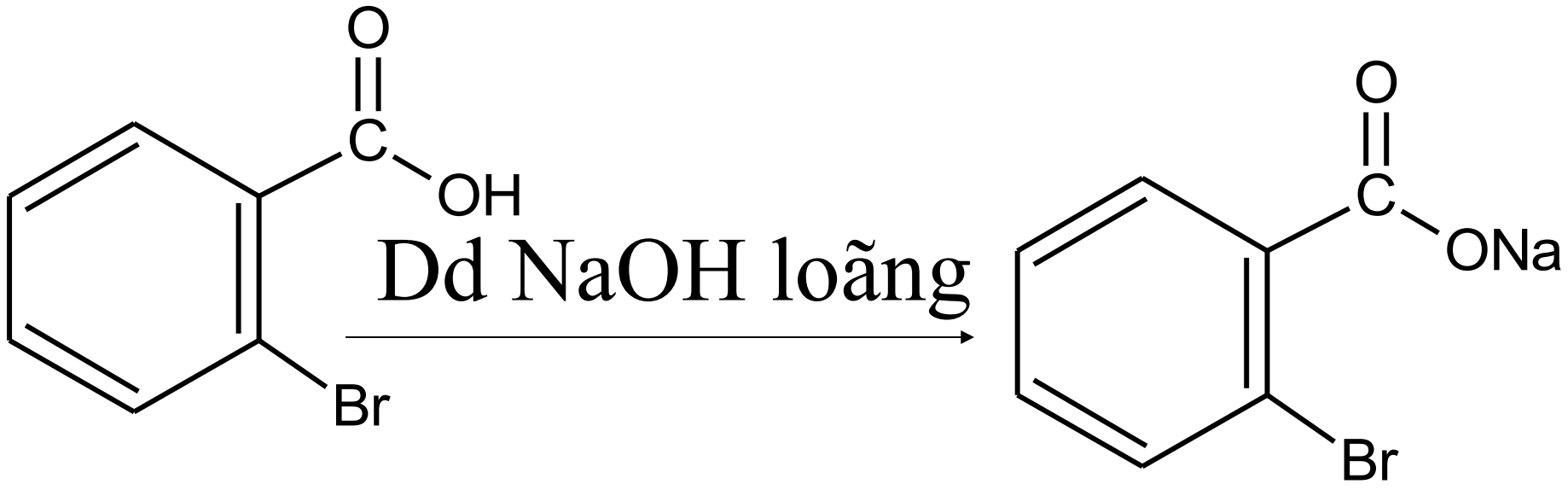
(c) (I)<(IV)<(II)<(III)

21. Sp của pư:



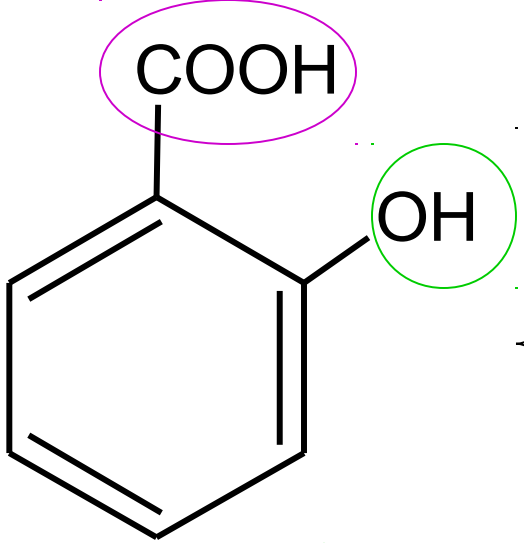
(c)

22. Sp của pư:



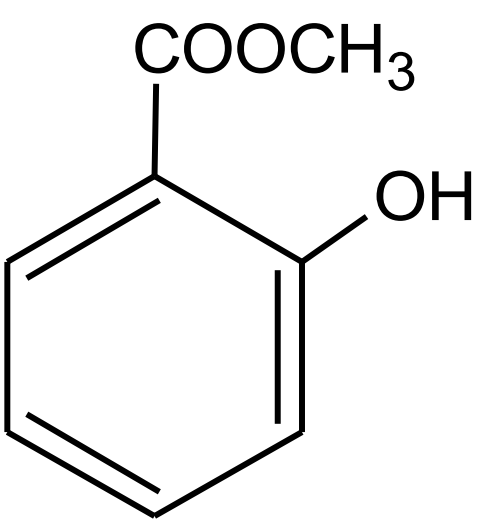
(a)

23. pư:

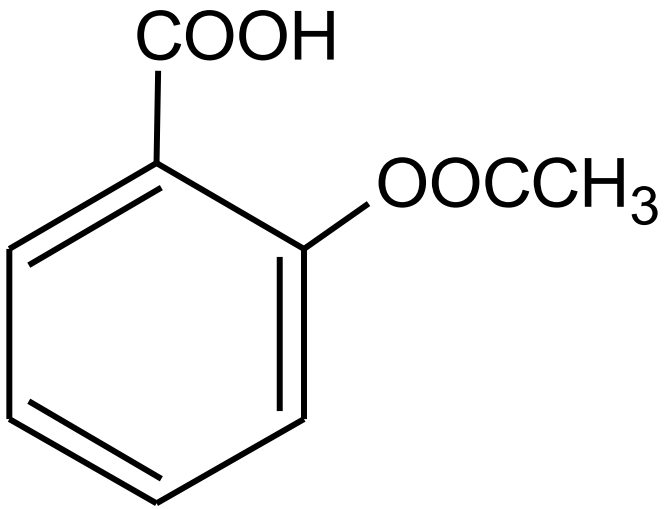


CH_3OH/H^+ → A ?

Ac_2O → B ?



A



B

(d)

CHƯƠNG VI: Hợp chất chứa Nitơ

1. Hợp chất dưới đây tên là:

$CH_3CH_2CH_2CH_2NHCH_3$

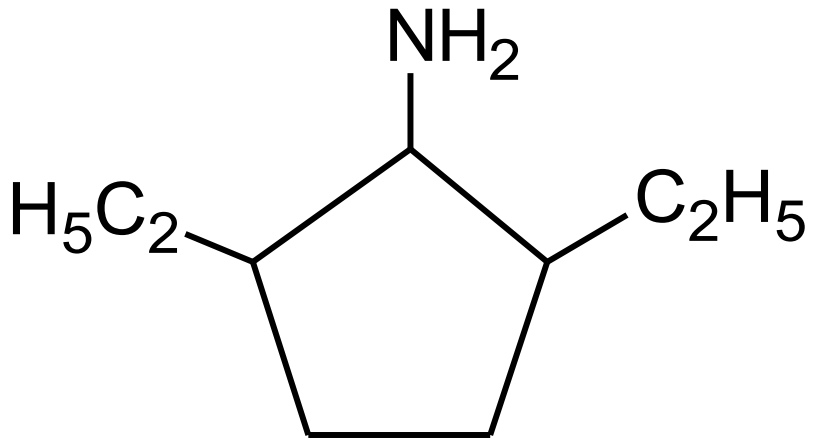
(c)Metyl-1-butylamin

2. Tên gọi: $CH_2=CHCH_2NHCH_3$

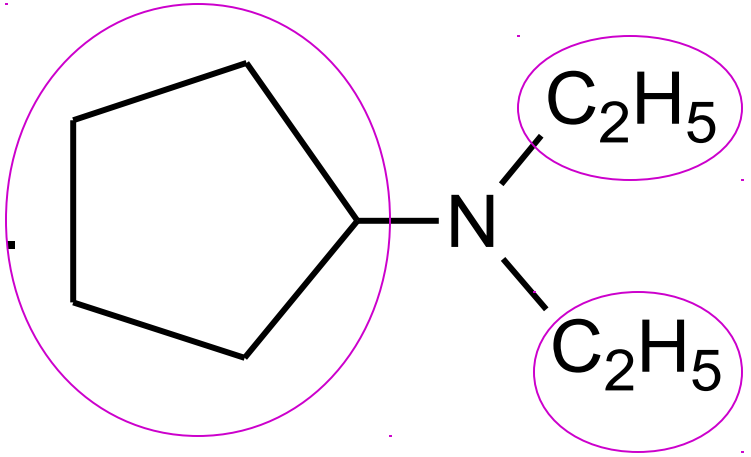
(a) Alylmetylamin

3. Hợp chất là xiclopentyldietylamin

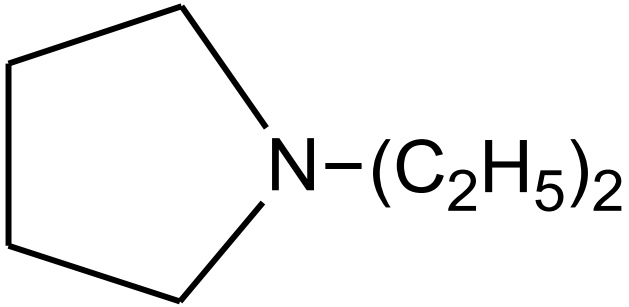
a.



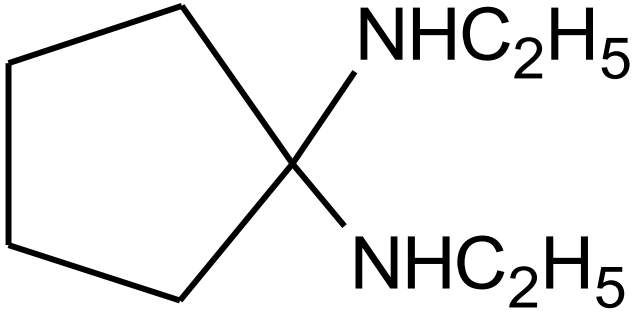
b.



c.



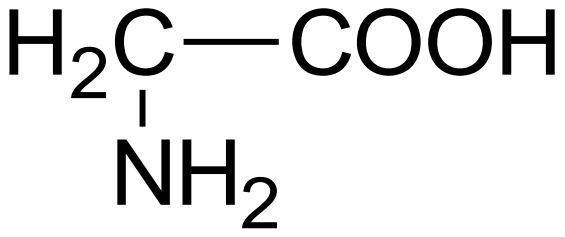
d.



(b)

4. Tên gọi các amin:

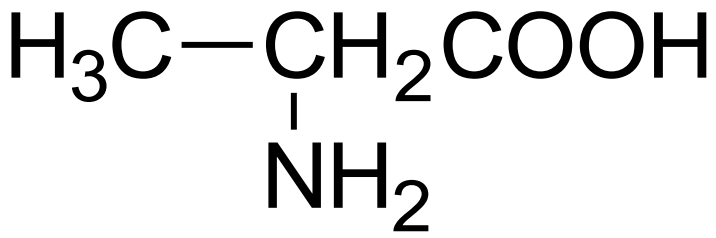
$CH_2(NH_2)COOH$



Glyxin

Axit aminoaxetic

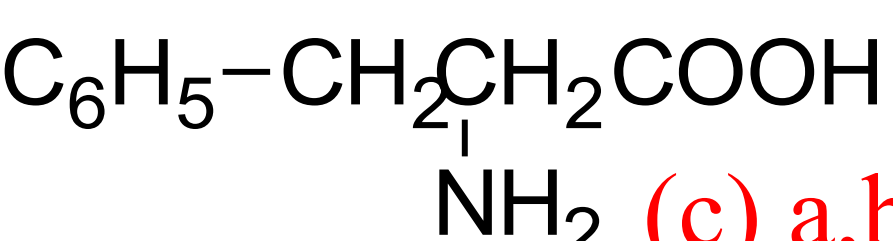
$CH_3CH(NH_2)COOH$



Alanin

Axit α-aminopropionic

$C_6H_5CH_2CH(NH_2)COOH$



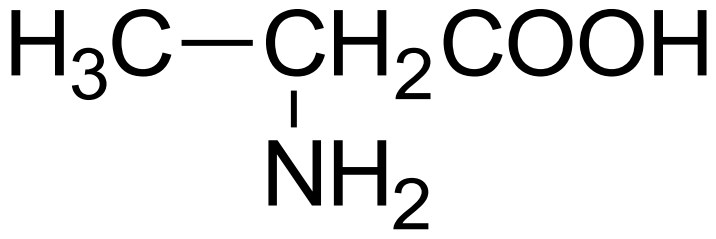
Phenylalanin

Axit α-amino-β-phenylpropionic

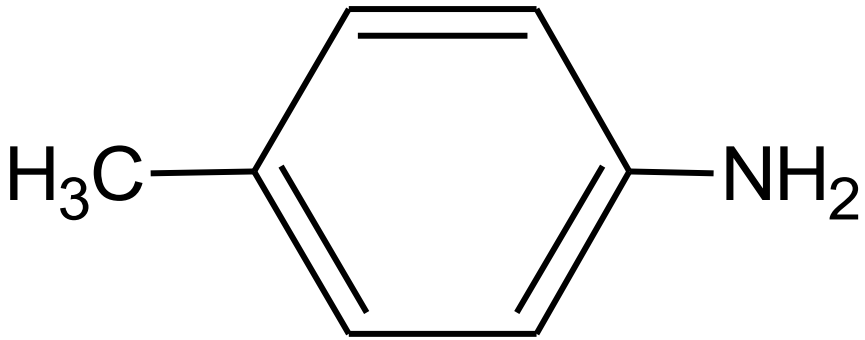
(c) a,b đúng

5. Bậc của các amin:

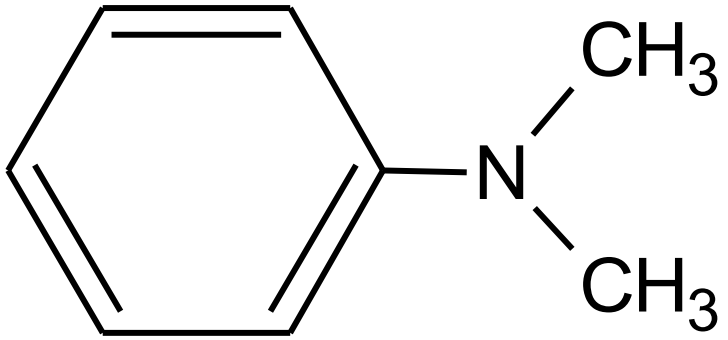
Alanin



p-Toludin

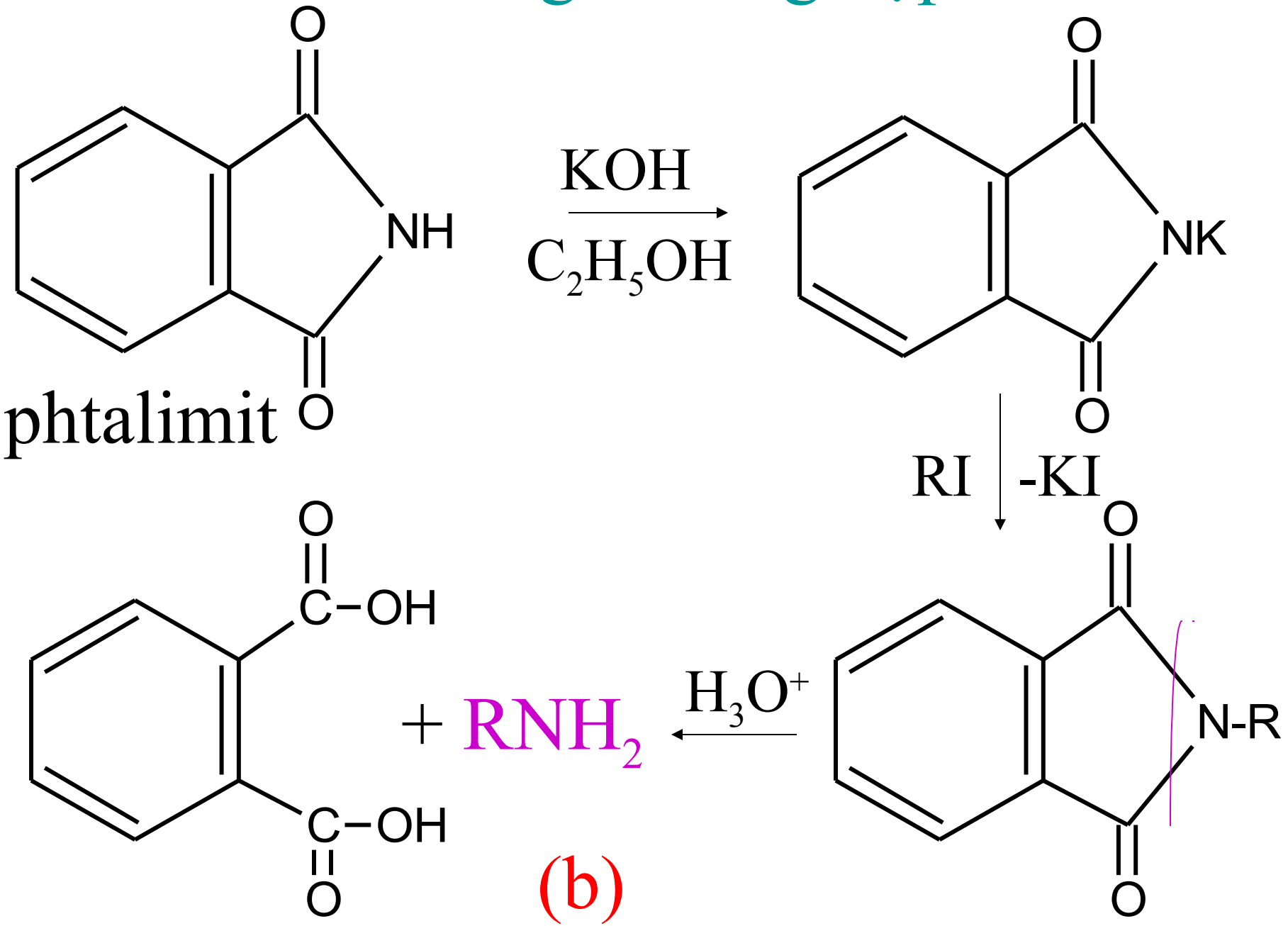


N,N-dimetylanilin



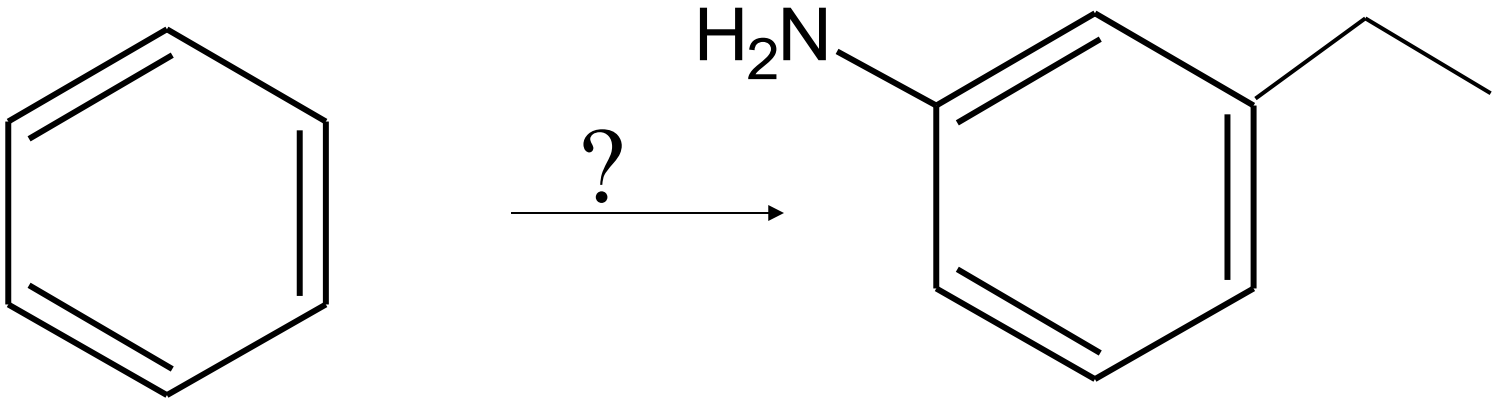
(d) 1,1,3

6. Pư Gabriel dùng để tổng hợp:

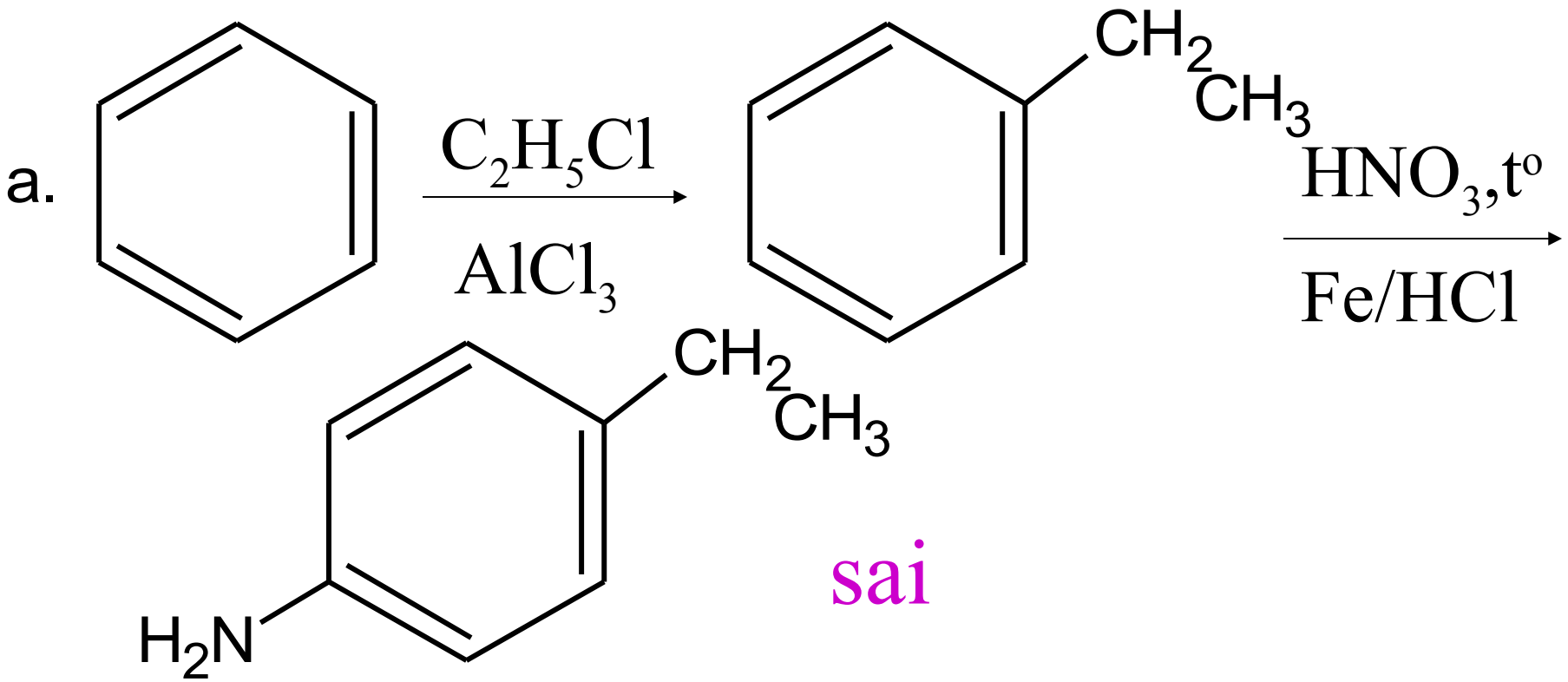


(b)

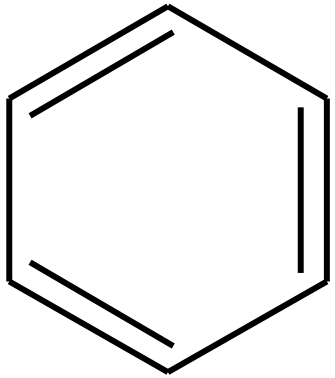
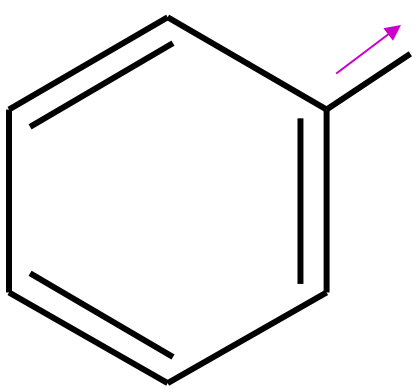
7. Quy trình chuyển hóa?

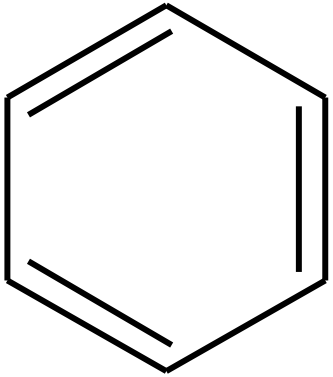
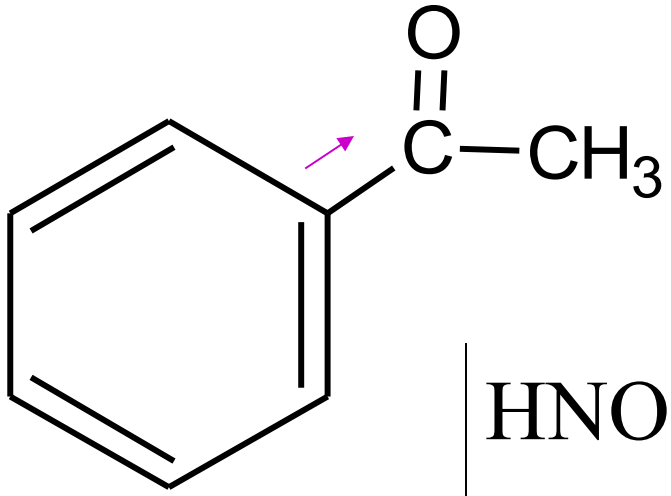
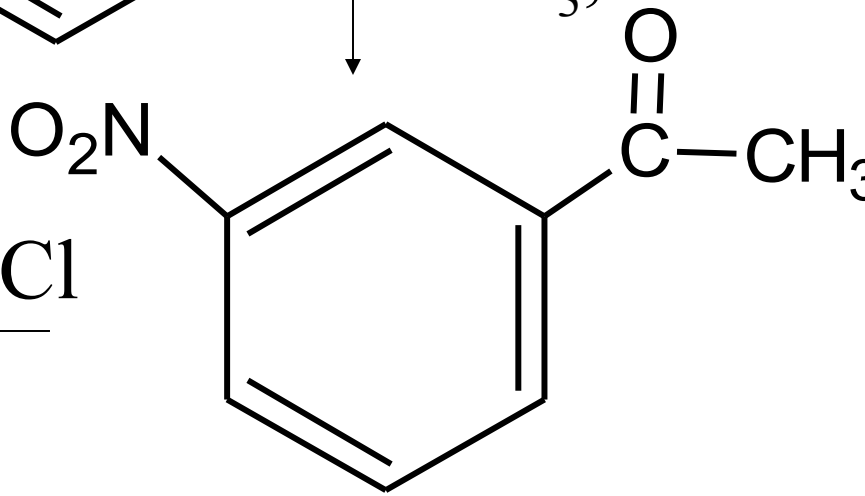
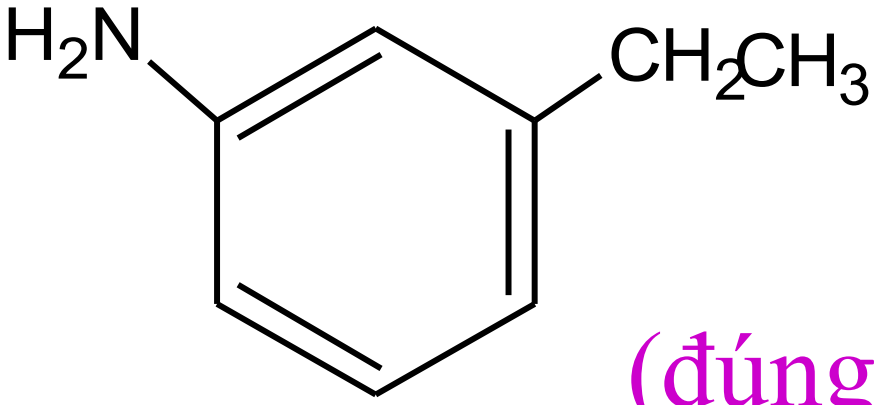


a.

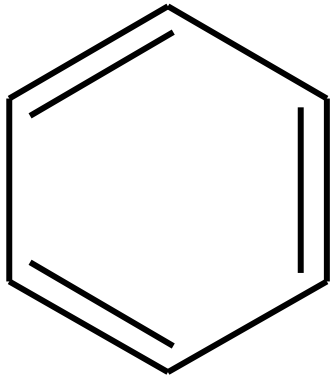
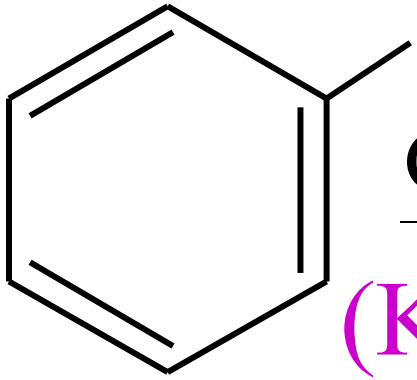


sai

b.  $\xrightarrow{HNO_3,t^o}$  $\xrightarrow[AlCl_3]{C_2H_5Cl}$ Không pư(sai)

c.  $\xrightarrow[AlCl_3]{CH_3COCl}$  $\xrightarrow{HNO_3,t^o}$  $\xrightarrow{Fe/HCl}$ 

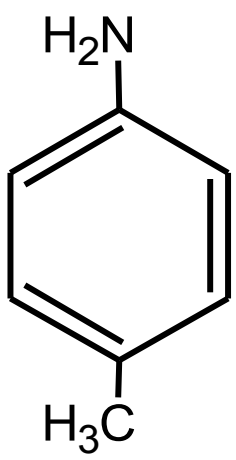
(đúng)

d.  $\xrightarrow{HNO_3, t^o}$  $\xrightarrow{C_2H_5COCl/AlCl_3}$ (Không pư)

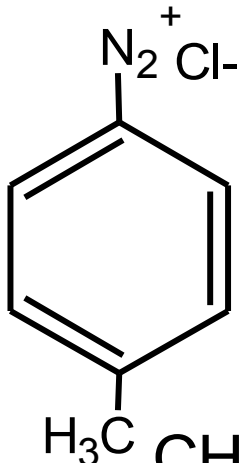
(c)

8. Bổ túc pư:

p-toludin $\xrightarrow[0\text{-}5^oC]{NaNO_2/HCl}$ A $\xrightarrow{CuCN}$ B $\xrightarrow[H_3O^+]{LiAlH_4}$ C $\xrightarrow{axeton}$ D

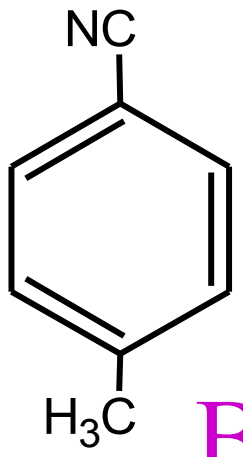


$\xrightarrow[0\text{-}5^oC]{NaNO_2/HCl}$



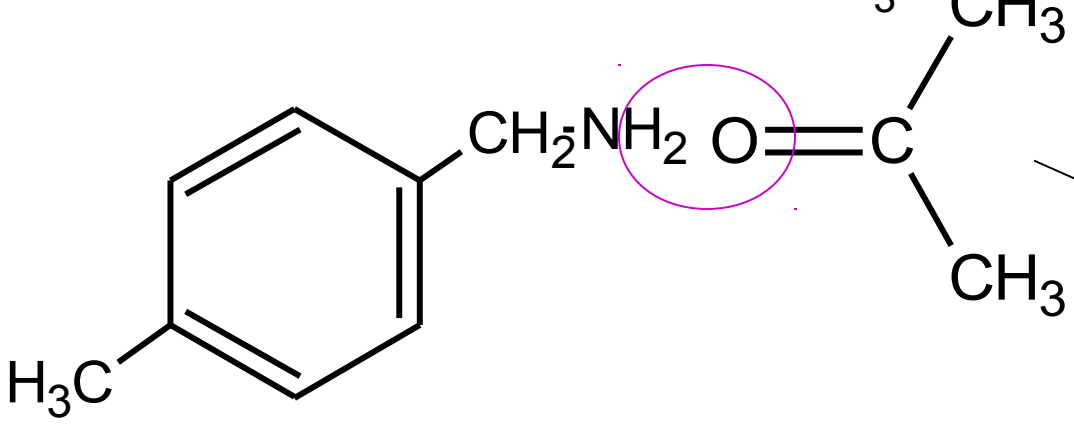
A

$\xrightarrow{CuCN}$



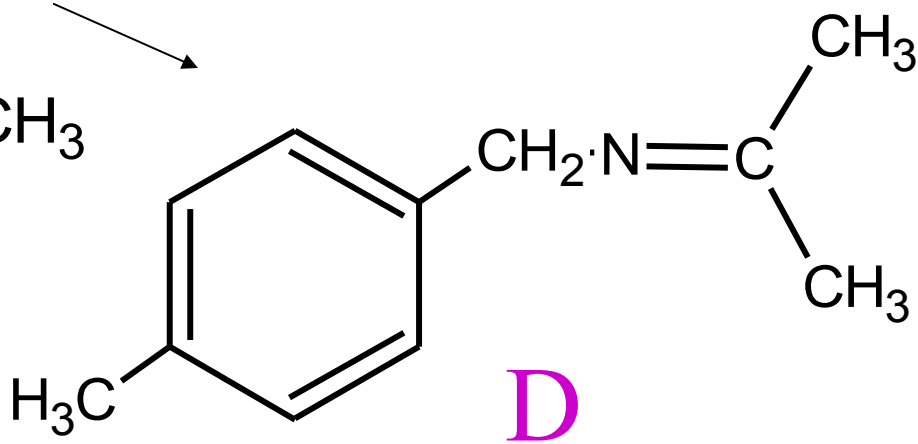
B

$\xrightarrow[H_3O^+]{LiAlH_4}$



C

(a)



D

9. Thực hiện pư:

$p\text{-}CH_3C_6H_4N_2^+Cl^-$ → A → p-cresol

$p\text{-}CH_3C_6H_4N_2^+Cl^-$ → B → p-clotoluen

$p\text{-}CH_3C_6H_4N_2^+Cl^-$ → C → p-bromtoluen

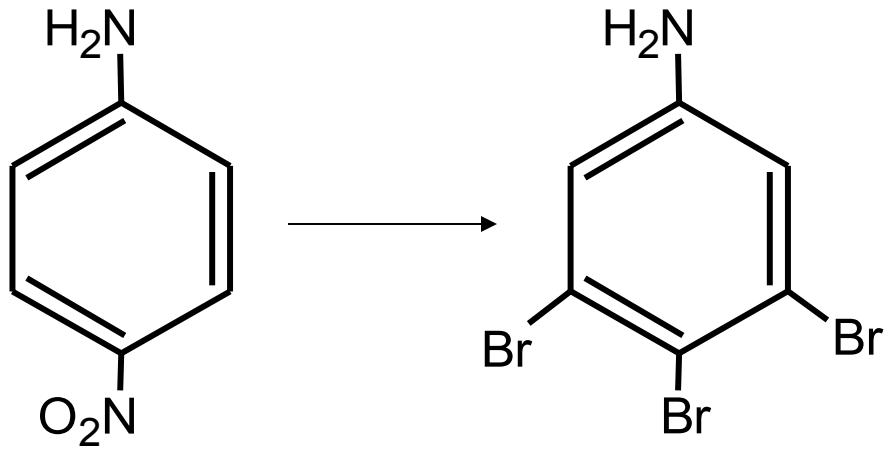
$p\text{-}CH_3C_6H_4N_2^+Cl^-$ $\xrightarrow{H_2O}$ $p\text{-}CH_3C_6H_4OH$

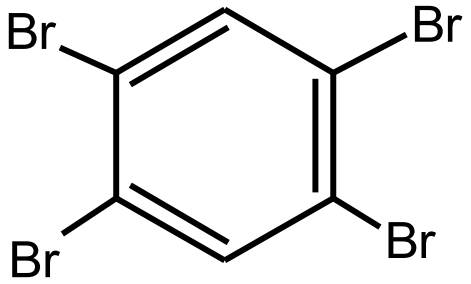
$p\text{-}CH_3C_6H_4N_2^+Cl^-$ $\xrightarrow{CuCl}$ $p\text{-}CH_3C_6H_4Cl$

$p\text{-}CH_3C_6H_4N_2^+Cl^-$ $\xrightarrow{CuBr}$ $p\text{-}CH_3C_6H_4Br$

(a)

10. Điều chế 3,4,5-tribromanilin từ p-nitroanilin nên chọn qui trình nào?

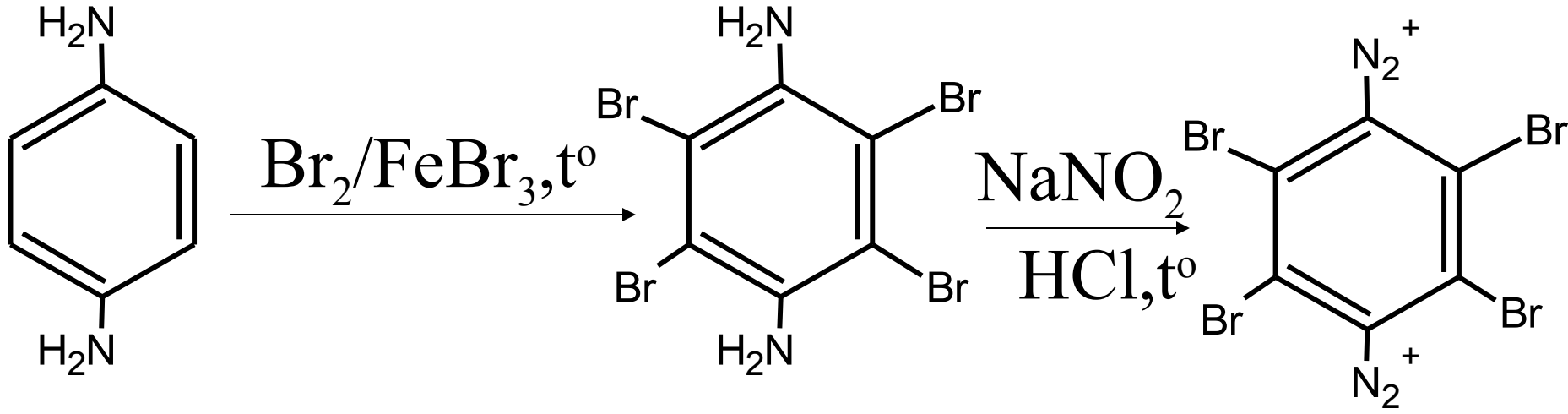


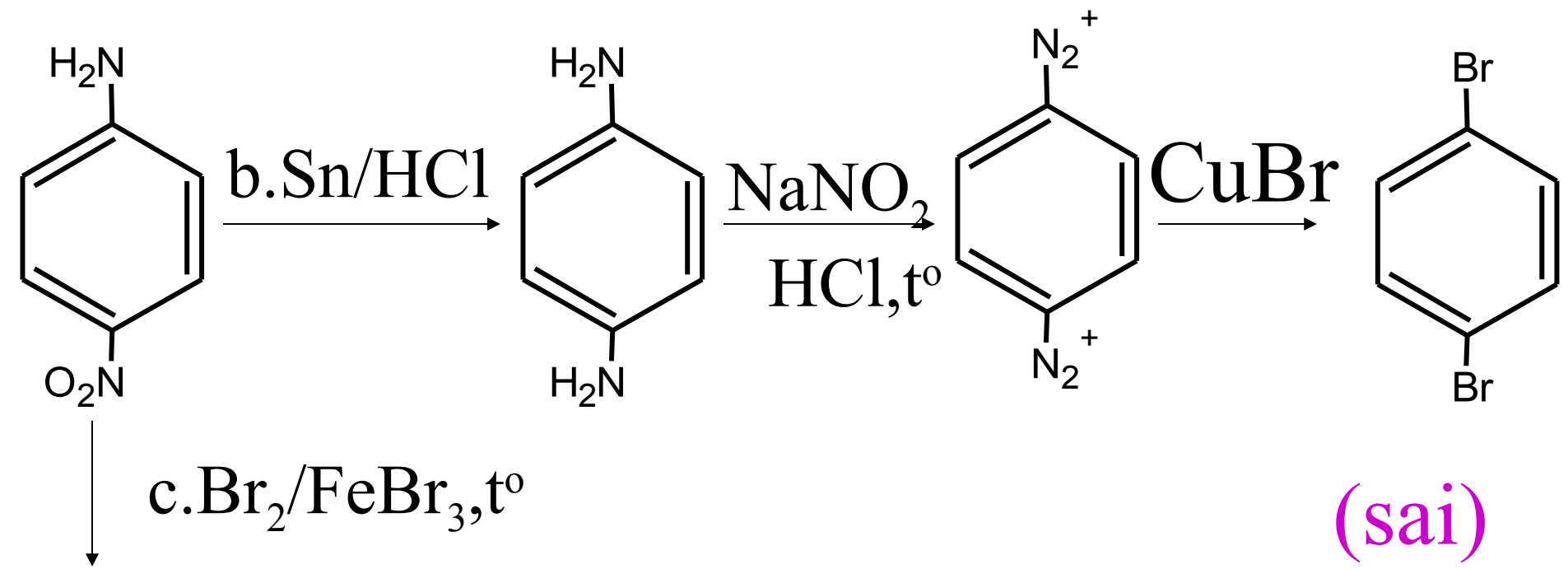


(sai)

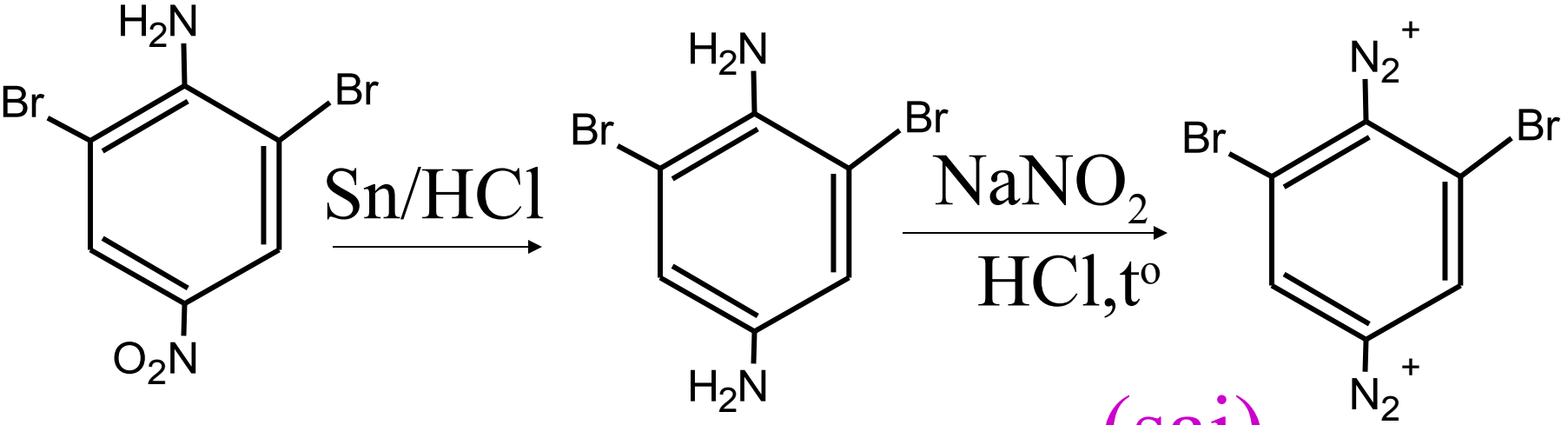
a. Sn/HCl

H_3PO_2

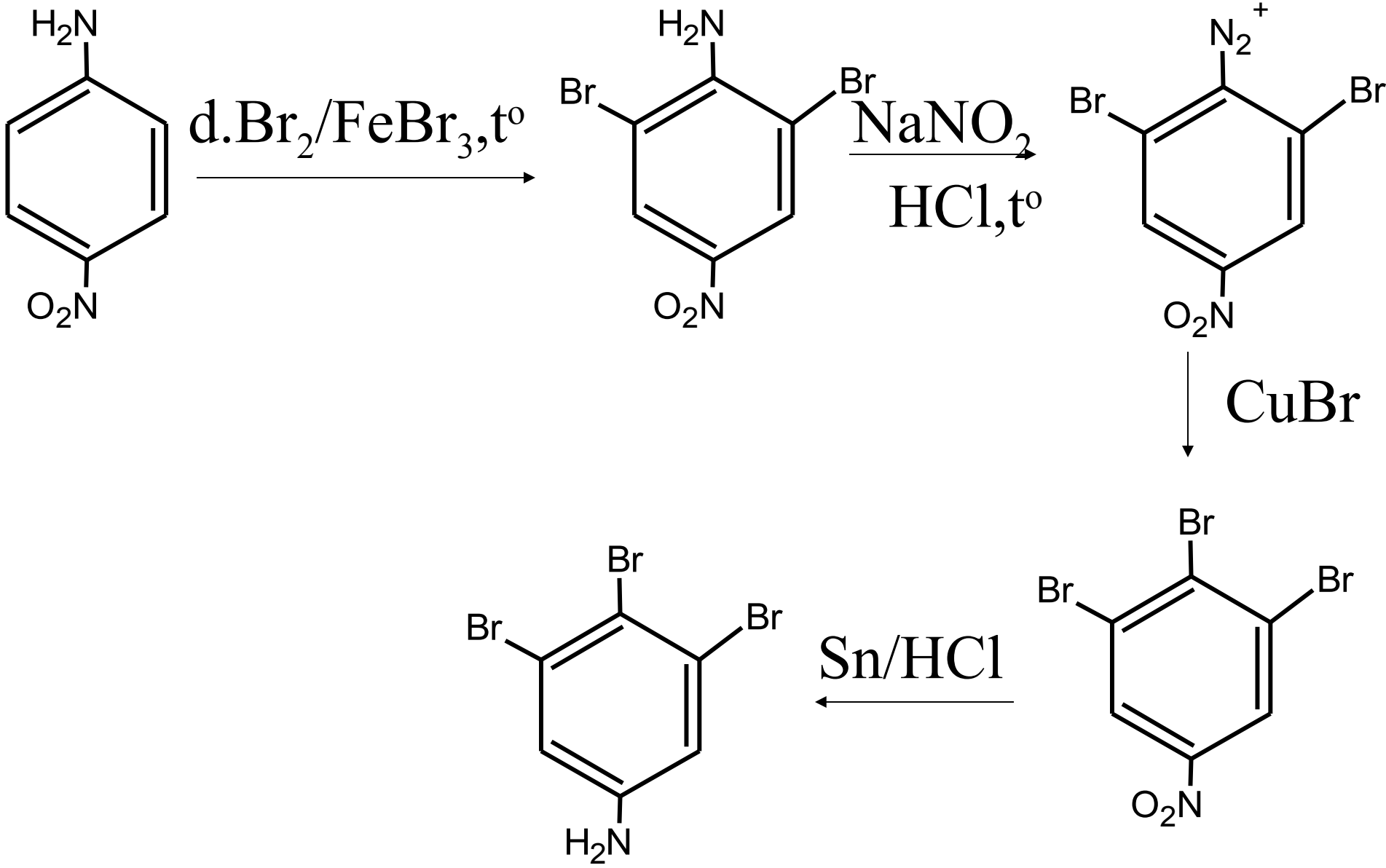



H2N
O2N
b.Sn/HCl
H2N
H2N
NaNO2
HCl,to
N2+
N2+
CuBr
Br
Br
c.Br2/FeBr3,to

(sai)

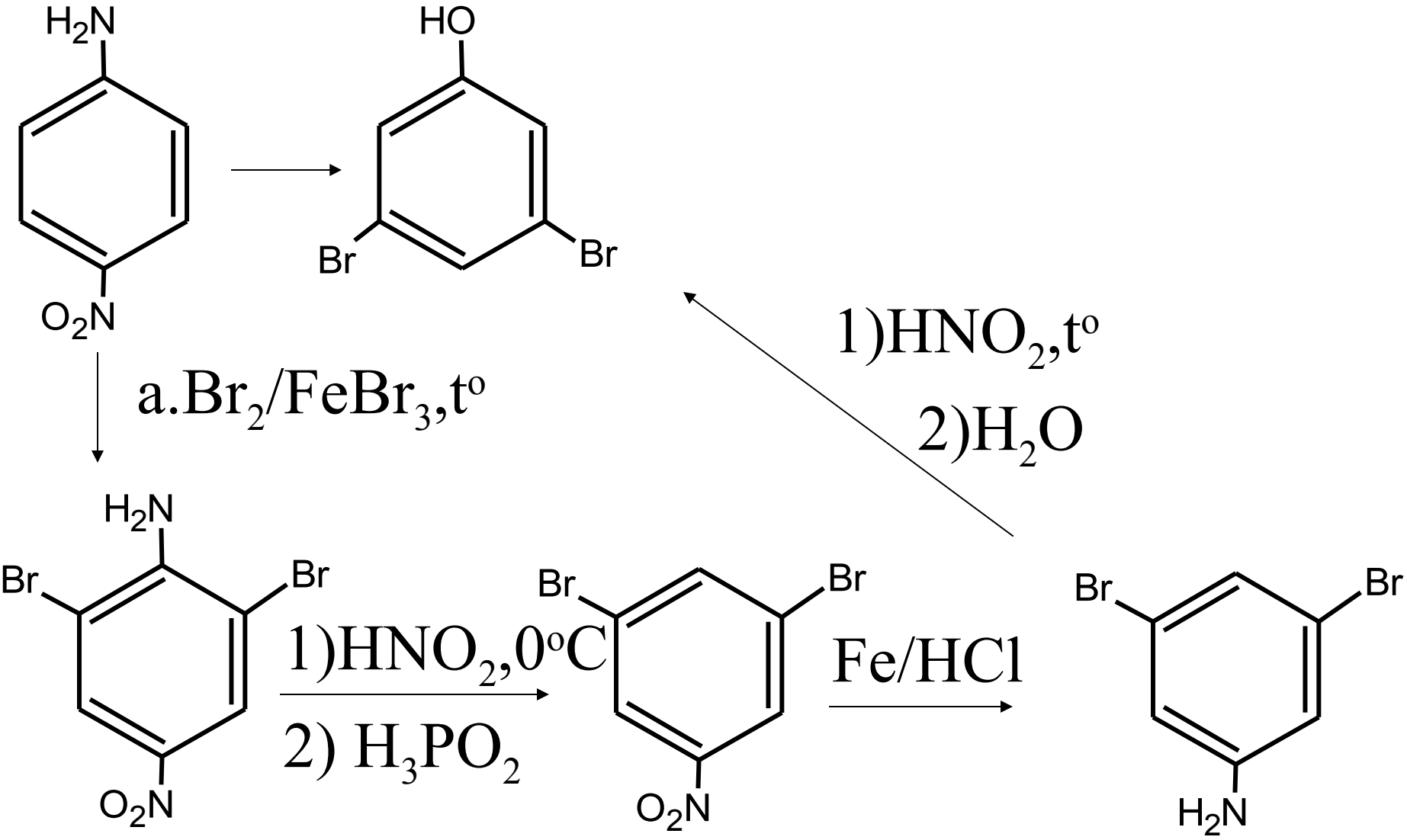

H2N
Br
Br
O2N
Sn/HCl
H2N
Br
Br
H2N
NaNO2
HCl,to
N2+
Br
Br
N2+

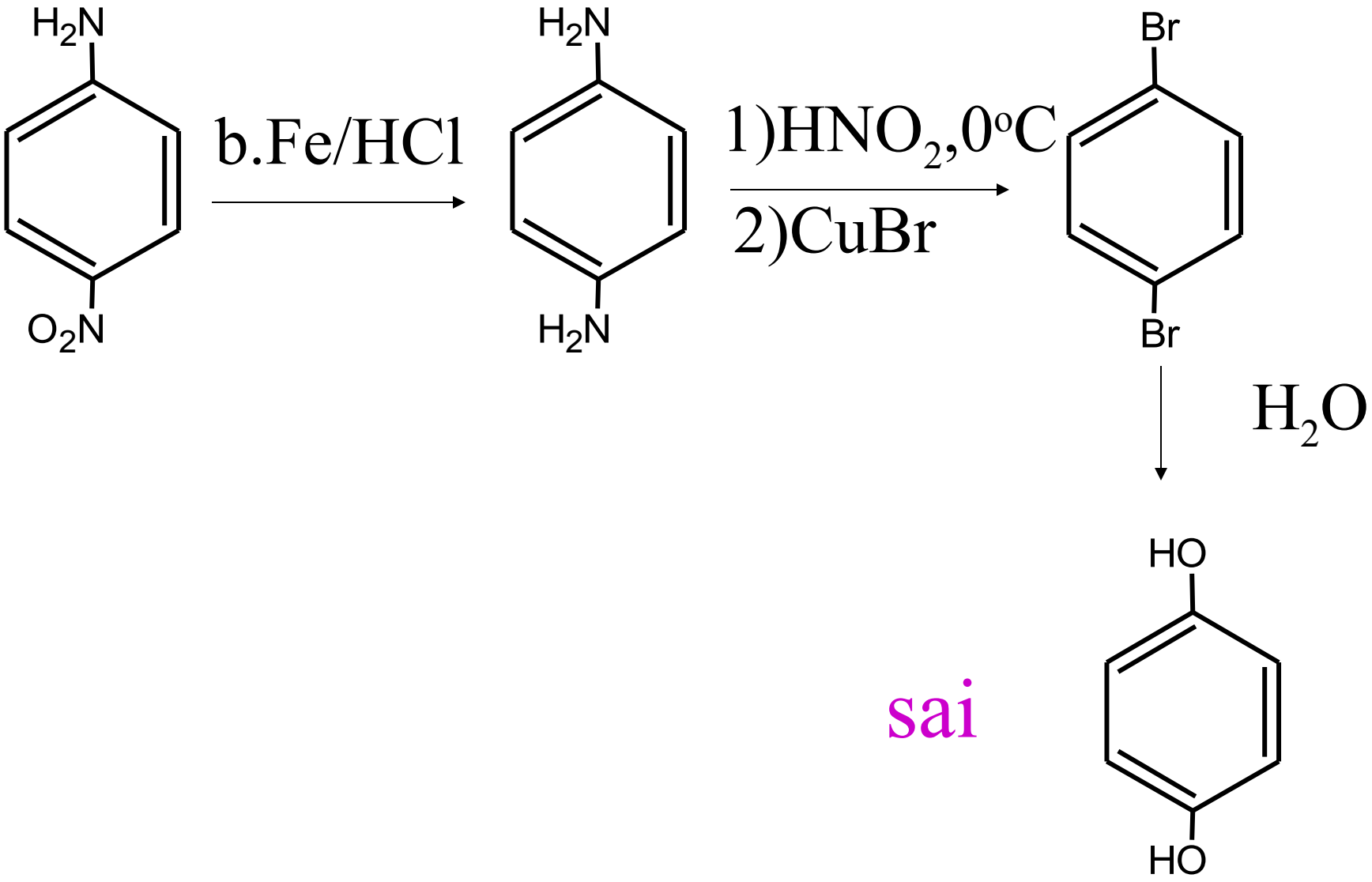
(sai)



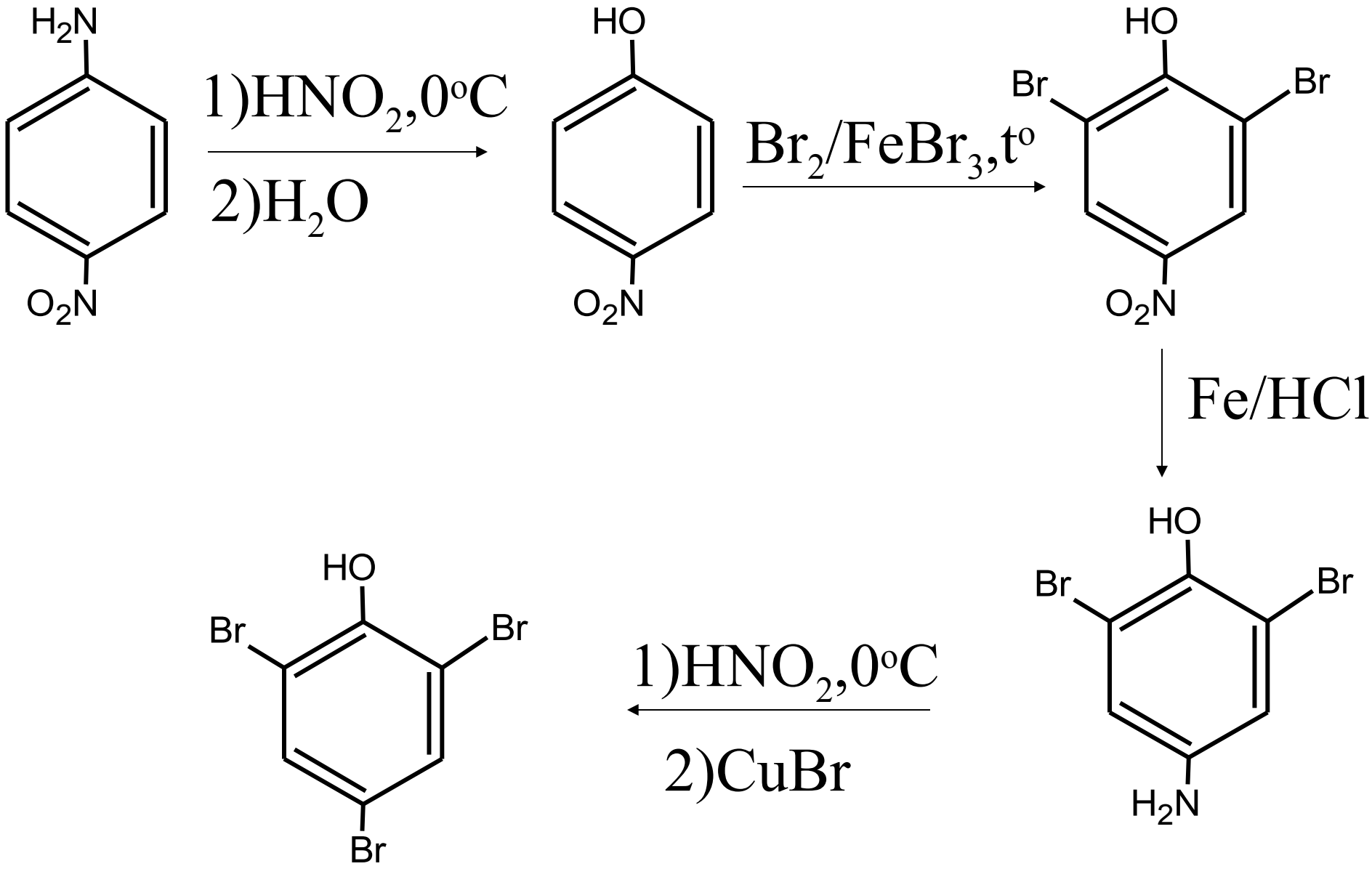
(d)

11. Từ p-nitroanilin đc 3,5-dibromphenol

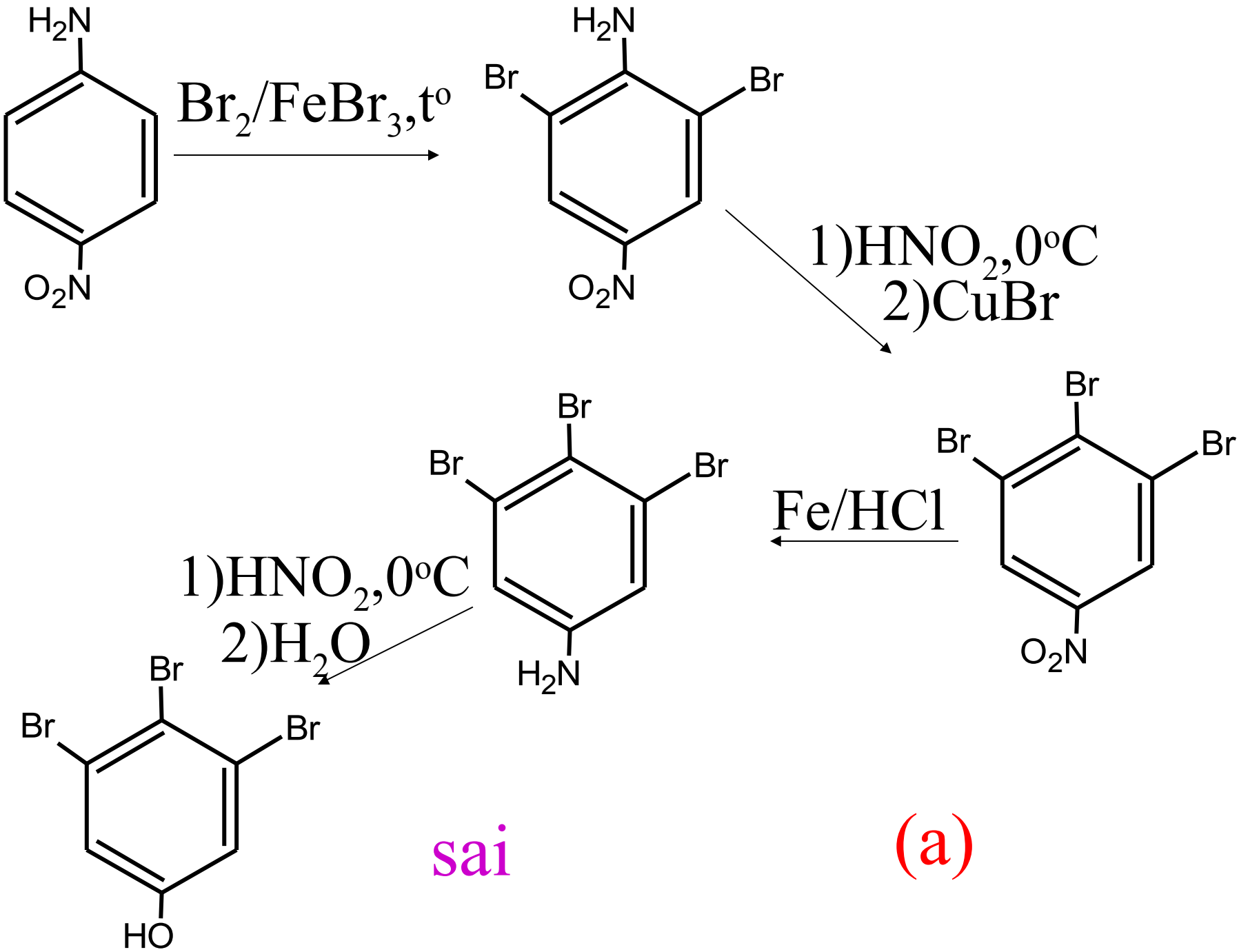




sai


H2N
O2N
1)HNO2,0oC
2)H2O
HO
O2N
Br2/FeBr3,to
HO
Br
Br
O2N
Fe/HCl
HO
Br
Br
H2N
1)HNO2,0oC
2)CuBr
HO
Br
Br
Br

sai

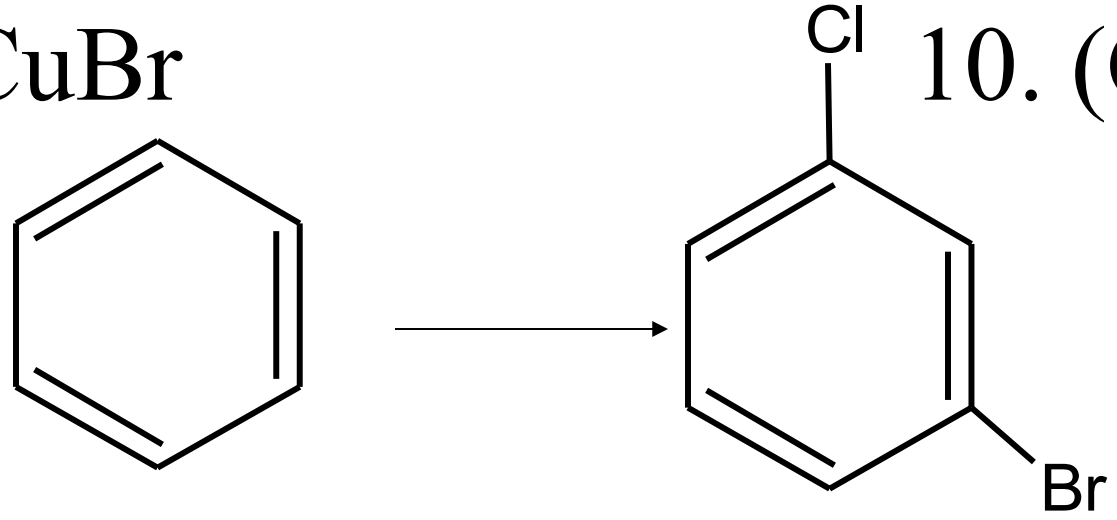

H_2N
O_2N
$Br_2/FeBr_3,t^o$
Br
Br
1)HNO_2,0°C
2)CuBr
Fe/HCl
1)HNO_2,0°C
2)H_2O
HO

sai

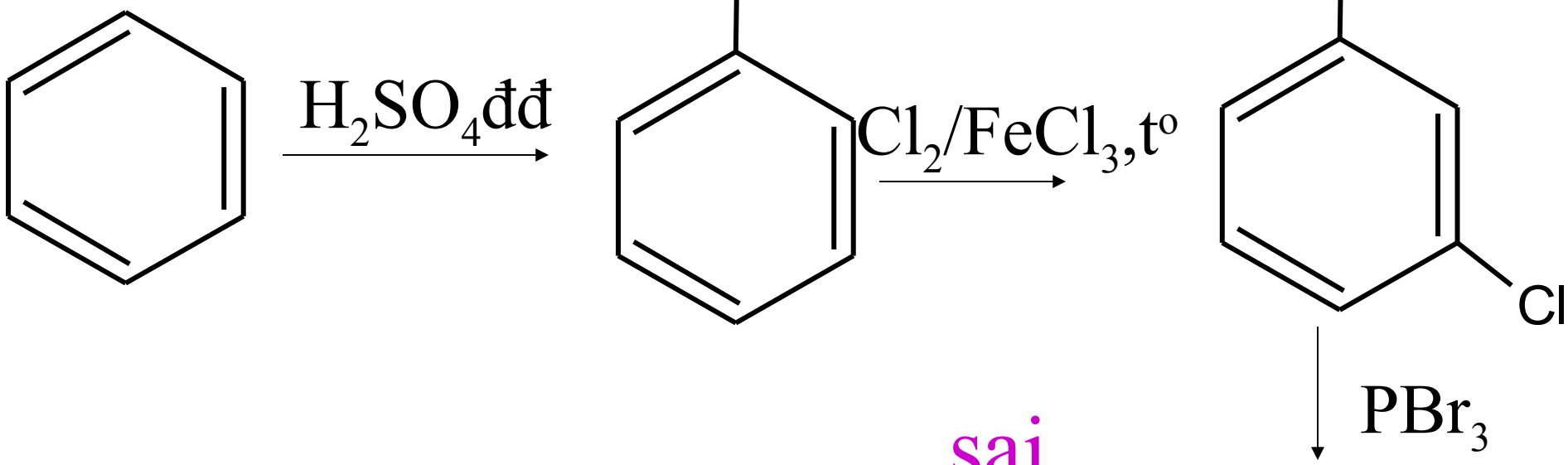
(a)

12. Để điều chế m-clobrombenzen từ benzen phải dùng các tác chất nào sau đây:

1. H_2SO_4đđ 2. $Cl_2/FeCl_3, t^o$ 3. $NaNO_2/HCl, 0^oC$ 4. Sn/HCl 5. Mg/ete khan 6. PBr_3 7. H_3PO_2 8. HNO_3/H_2SO_4đđ 9. CuBr 10. $(CH_3CO)_2O$

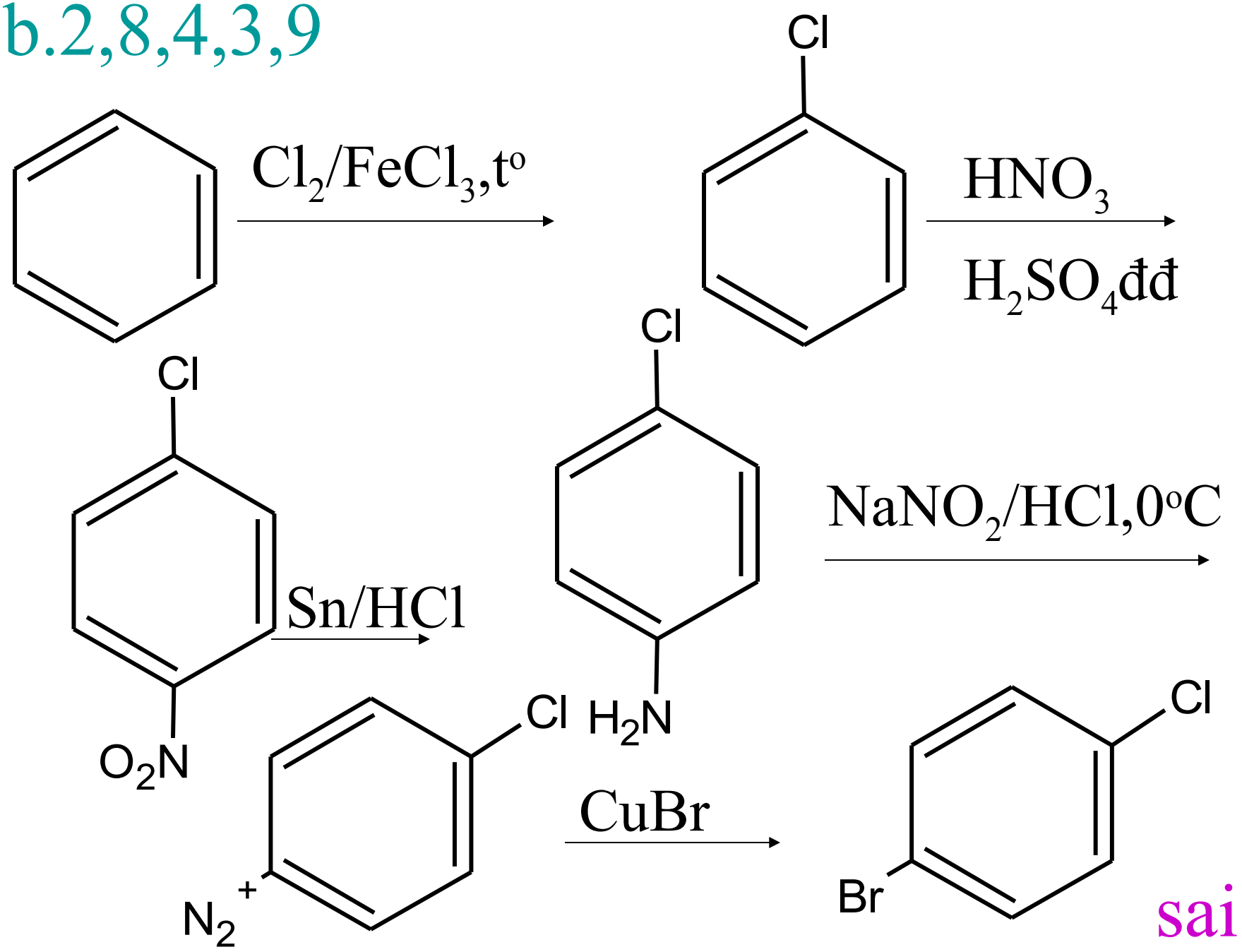


a. 1,2,6



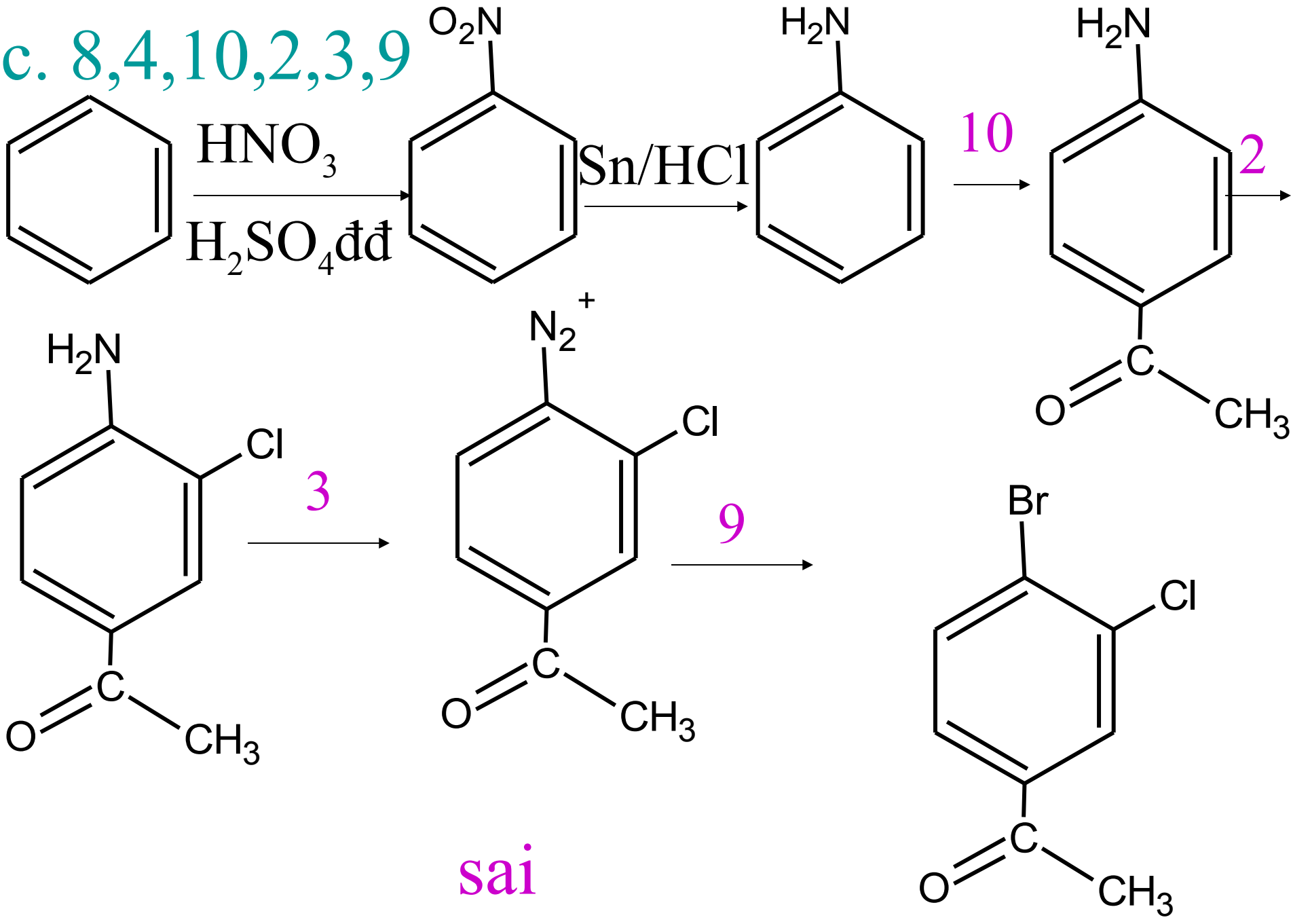
sai

b.2,8,4,3,9

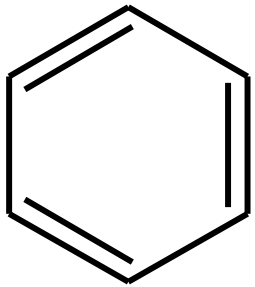

Cl2/FeCl3,to
HNO3
H2SO4đđ
Cl
Sn/HCl
NaNO2/HCl,0oC
O2N
H2N
CuBr
N2+
Br

sai

c. 8,4,10,2,3,9

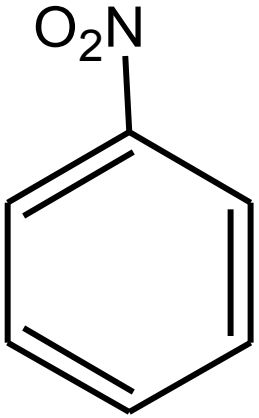


d. 8,2,4,3,9

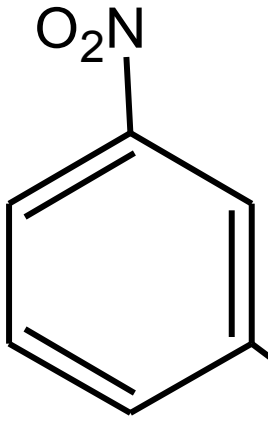


HNO_3

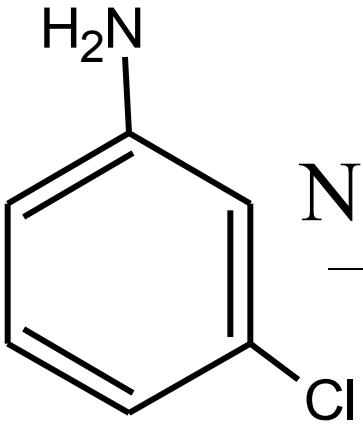
$H_2SO_4đđ$



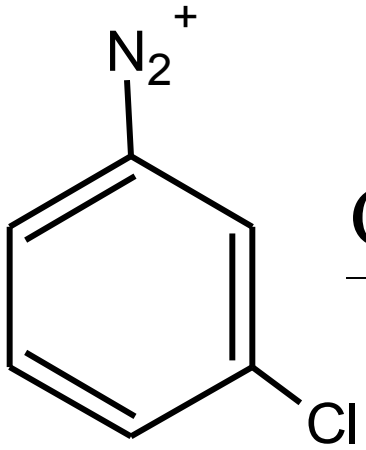
$Cl_2/FeCl_3,t^o$



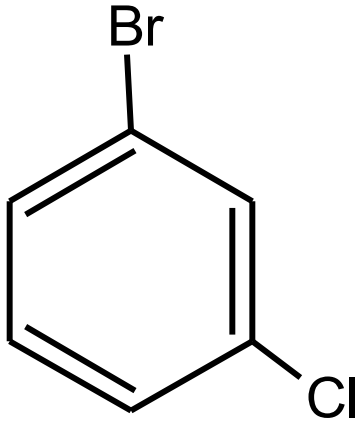
Sn/HCl



$NaNO_2/HCl,0^oC$



CuBr



đúng

(d)

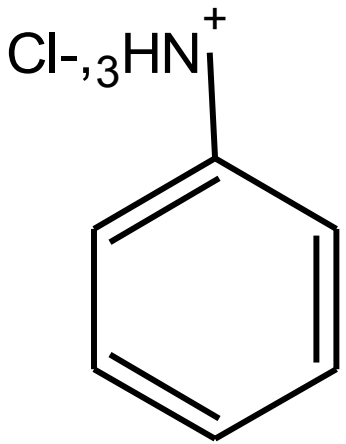
13. Phân biệt:clorur anlinium và p-cloanilin

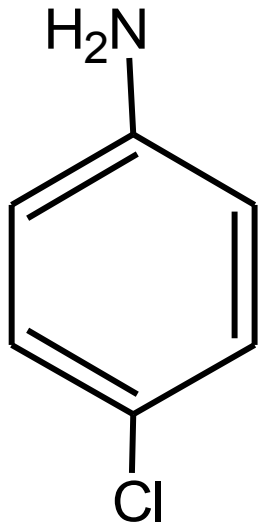
a. H_2O

b.Dd HCl loãng

c. a,b đều được

d. a,b đều không được





Câu a

14. Phân biệt: p-$CH_3C_6H_4NH_3^+$,Cl^- và p-$CH_3C_6H_4NH_2$

a. H_2O

b. Dd HCl

c. Dd NaOH

d. a,c đều dược