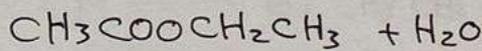
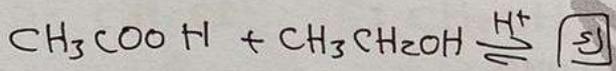
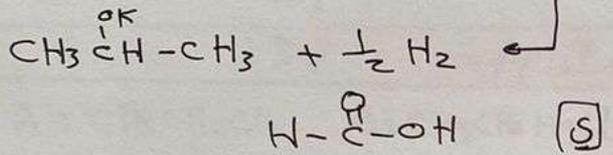
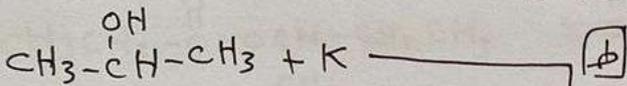
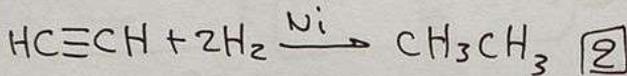
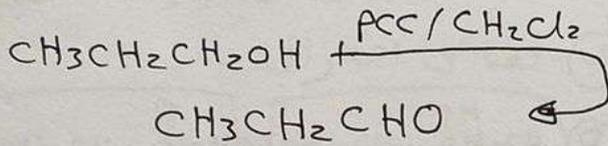
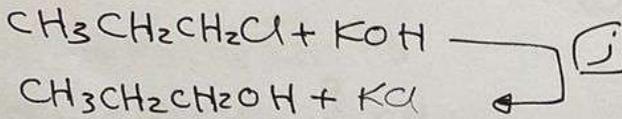


الكيمياء العضوية د. هاني السلاق

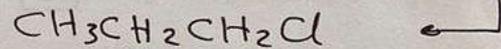
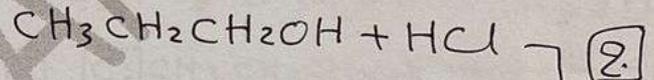
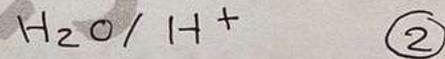
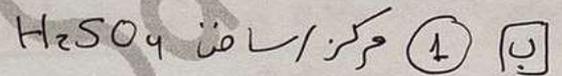
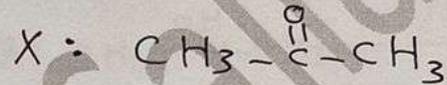
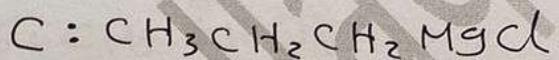
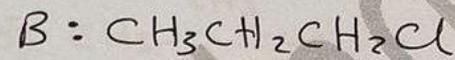
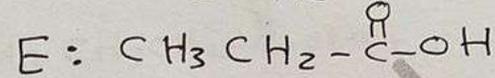
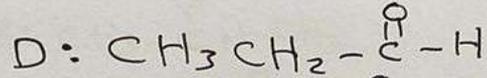
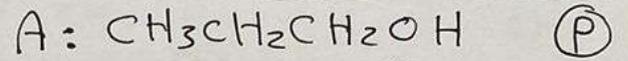
الممتاز في الكيمياء / حلول للدرس: 2:

أما (CH<sub>3</sub>CH<sub>2</sub>CH<sub>2</sub>Cl) فلها محدد تفاعل

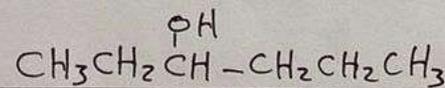
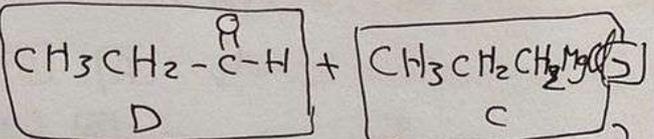
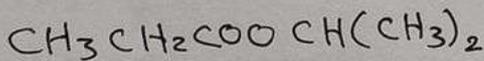
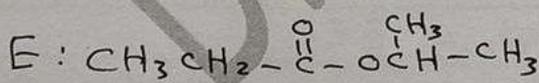
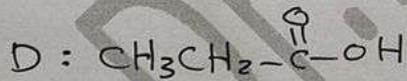
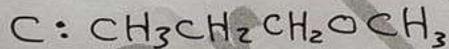
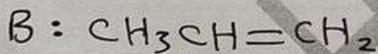
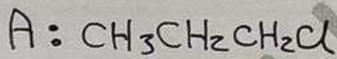


حلول أسئلة الكيمياء العضوية

134 صفحة



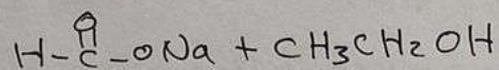
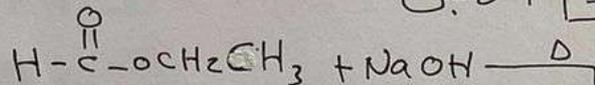
135 صفحة 3



134 صفحة 2

[3]-د [9]-ر [1]-ب [2]-P

[5] التصبن



[9] بإضافة محلول (Br<sub>2</sub>/CH<sub>2</sub>Cl<sub>2</sub>)

(البرتقالي المصفر) إلى CH<sub>2</sub>=CH<sub>2</sub>

ويزول اللون ويصبح شفاف

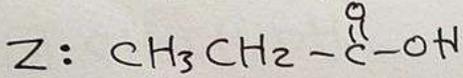
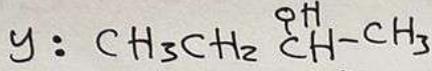
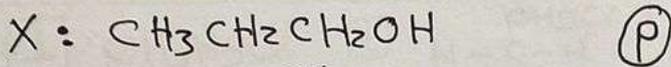
مع كل أمينا 2 الحبر  
د. هاني السراق

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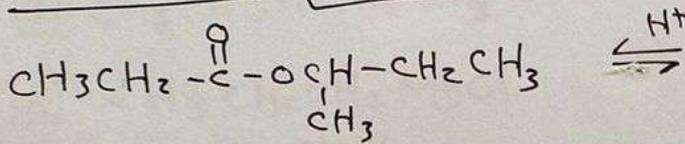
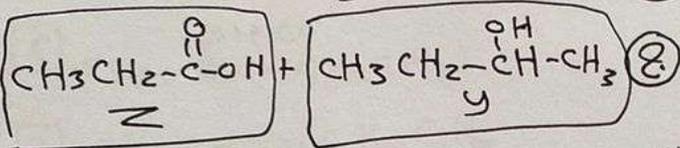
الممتاز في الكيمياء

6 صفحتة 137

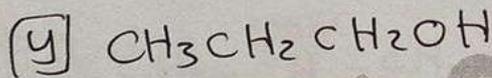
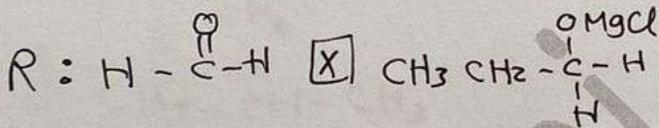
4 صفحتة 135



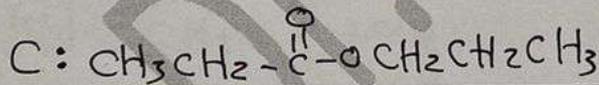
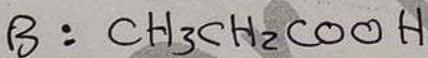
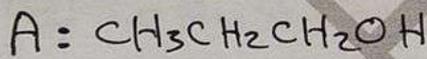
(B) تفاعل اختزال



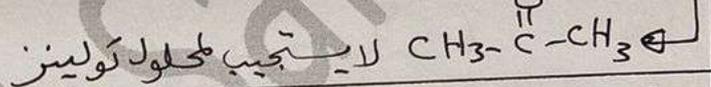
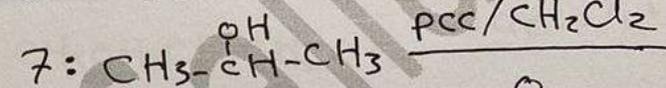
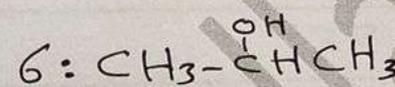
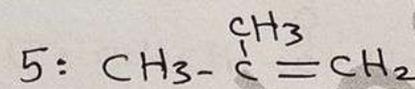
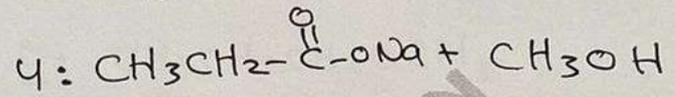
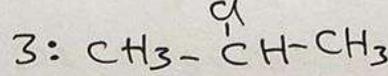
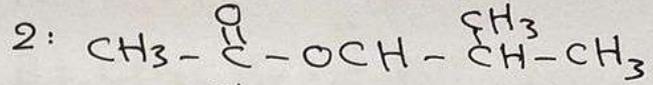
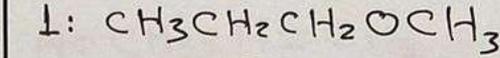
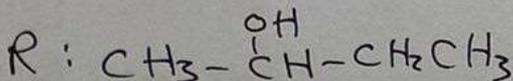
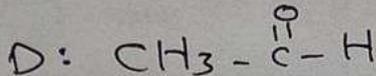
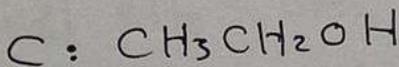
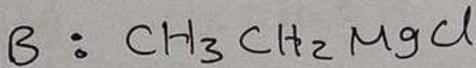
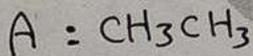
7 صفحتة 137



8 صفحتة 137

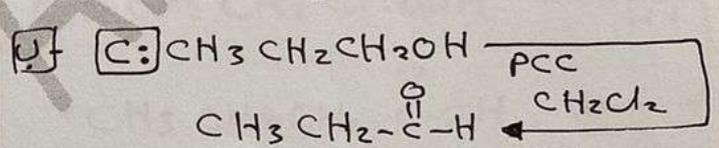


9 صفحتة 138

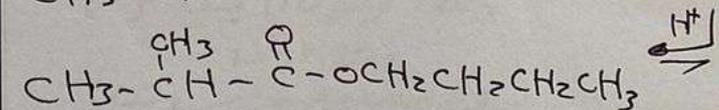
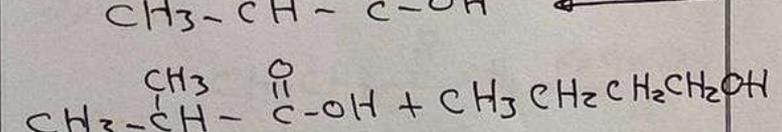
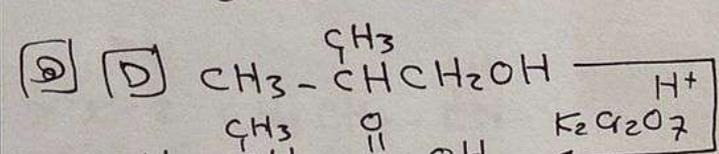
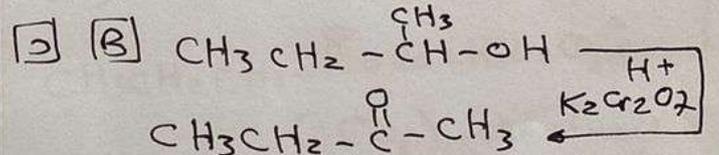


5 صفحتة 136

(P): [A: كود ثاني] - [B كود ثانوي]

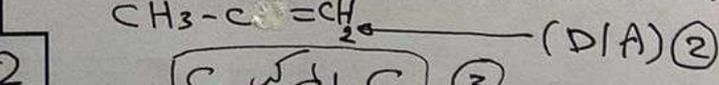


(R) [A] لا يتأكسد لأنه كود ثاني [A]



(U) ظروف حدوث تفاعل الحذف في الكحول

تكوين الكحول مع حمض المركز ( $\text{H}_3\text{PO}_4$  أو  $\text{H}_2\text{SO}_4$ )



2

(3) المركب C

د. هاني السلاق

الممتاز في الكيمياء

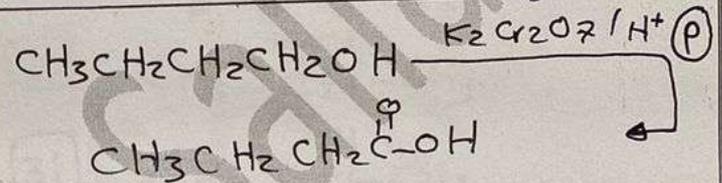
1 صفحة 141

10 صفحة 138

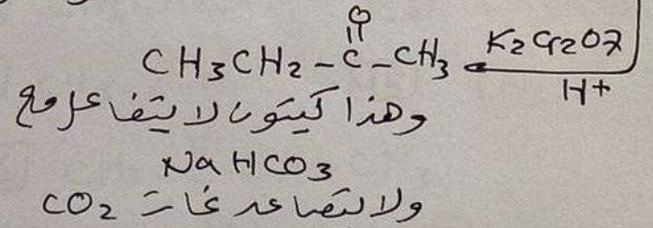
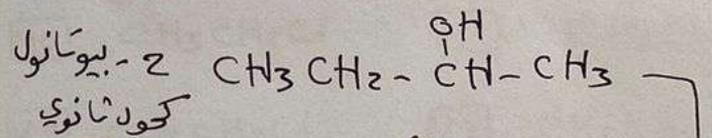
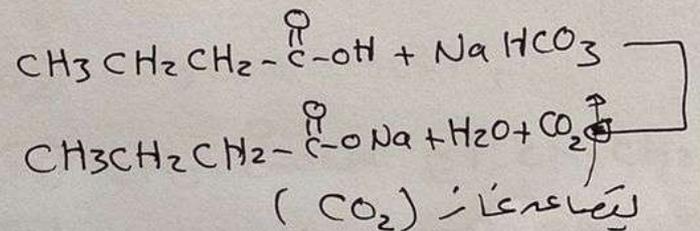
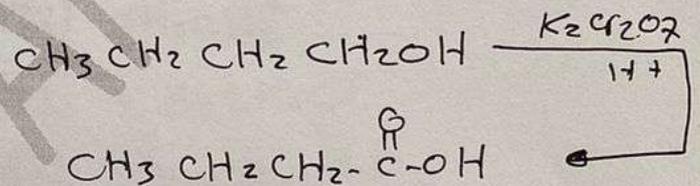
- [1]  $\text{CH}_3\text{MgCl}$  [2]  $\text{H}-\overset{\text{OMgCl}}{\underset{\text{CH}_3}{\text{C}}}-\text{H}$
- [3]  $\text{CH}_3\text{CH}_2\text{OH}$
- [4]  $\text{CH}_3\text{CH}_2\text{Cl}$  [5]  $\text{CH}_3\text{CH}_2\text{MgCl}$
- [6]  $\text{CH}_3-\overset{\text{OMgCl}}{\text{C}}-\text{CH}_2\text{CH}_3$
- [7]  $\text{CH}_3\text{CHOHCH}_2\text{CH}_3$
- [8]  $\text{CH}_3\text{CH}_2\text{CH}_2\text{MgCl}$
- [9]  $\text{CH}_3-\overset{\text{OMgCl}}{\underset{\text{CH}_3}{\text{C}}}-\text{CH}_2\text{CH}_2\text{CH}_3$
- [10]  $\text{CH}_3-\overset{\text{OH}}{\underset{\text{CH}_3}{\text{C}}}-\text{CH}_2\text{CH}_2\text{CH}_3$
- [11]  $\text{CH}_3-\overset{\text{Cl}}{\text{C}}-\text{CH}_3$
- [12]  $\text{CH}_3-\overset{\text{MgCl}}{\text{C}}-\text{CH}_3$
- [13]  $\text{CH}_3-\overset{\text{OMgCl}}{\text{C}}-\text{CH}_3$   
 $\text{CH}_3-\text{CH}-\text{CH}_3$
- [14]  $\text{CH}_3-\overset{\text{OH}}{\text{C}}=\text{CH}_3$   
 $\text{CH}_3-\text{CH}-\text{CH}_3$
- [15]  $\text{CH}_3\text{CH}_2\text{Cl}$
- [16]  $\text{CH}_3\text{CH}_2\text{OH}$
- [17]  $\text{CH}_2=\text{CH}_2$
- [18]  $\text{CH}_2\text{BrCH}_2\text{Br}$
- [19]  $\text{CH}_3\text{CH}_3$
- [20]  $\text{CH}_3\text{CH}_2\text{Cl}$
- [21]  $\text{CH}_3\text{CH}_2\text{OH}$

- A:  $\text{CH}_3\text{CH}=\text{CH}_2$
- B:  $\text{CH}_3\text{CH}_2-\overset{\text{O}}{\parallel}{\text{C}}-\text{OH}$
- D:  $\text{CH}_3\text{CH}_2\text{CH}_2\text{Cl}$
- E:  $\text{CH}_3\text{CH}_2\text{CH}_2\text{OCH}_3$
- C:  $\text{CH}_3\text{CH}_2-\overset{\text{O}}{\parallel}{\text{C}}-\text{O}-\overset{\text{CH}_3}{\text{C}}-\text{CH}_3$

11 صفحة 138



كود أولي / 1- بيوتانول (ك)



ملاحظة: عند استخدام (K<sub>2</sub>Cr<sub>2</sub>O<sub>7</sub>/H<sup>+</sup>) في التأكسد وعند حدوث تآكل يتغير لون المحلول من البرتقالي إلى الأخضر.

د. هاني السلاق

الممتاز في الكيمياء

