

ECOLE NATIONALE PRÉPARATOIRE AUX ÉTUDES D'INGENIORAT

3^{ème} Année Préparatoire

Année Scolaire : 2006/2007

PARTIEL

Module: Chimie Organique.

Semestre : 2...

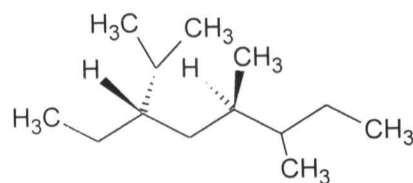
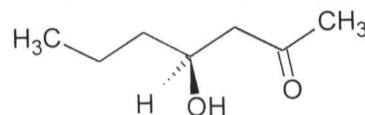
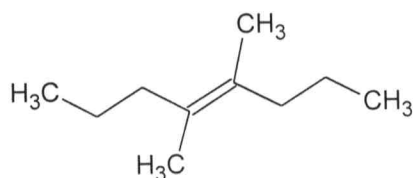
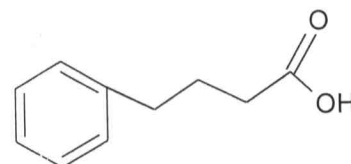
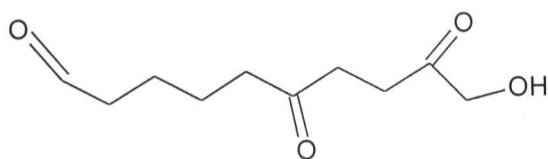
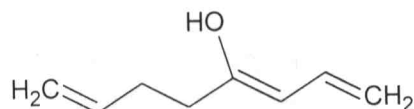
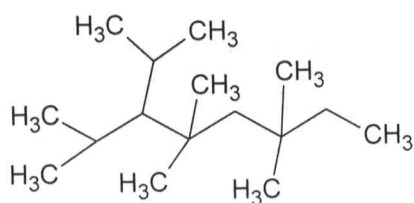
Date:...

Durée : 2heures....

	Q1	Q2	Q3	Observation
BAREME				

EXERCICE 1 (5pts)

Nommer les composés suivants selon la nomenclature systématique [IUPAC] en précisant les configurations comme indiquées.



EXERCICE 2 (6pts)

A/ Donner les formules développées des composés suivants.

- 7-isopropyl-3,6-diméthyldecane
- 4-phénylnonane-5-one
- 4-(N-éthyl-N-méthylamino)hexane-1-ol

B/ représenter les composés suivants en projective (CRAM)

- (4*S*,5*R*)-5-amino-4-hydroxy-5-méthylheptanal
- (1*Z*,4*E*)-5-amino-1-chloro-4-hydroxyhepta-1,4-dien-3-one
- (3*S*,5*R*)-5-amino-2-(hydroxyméthyl)-3,5-diméthylheptanal
- (3*S*,5*Z*)-2-(hydroxyméthyl)-3,5,6-triméthylhept-5-énal

EXERCICE 3 (6pts)

A / Soit le composé de formule brute C_8H_{16} .

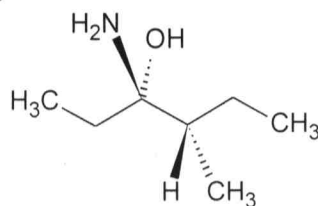
- En considérant l'isomérisie cis-trans dans le cyclohexane ayant deux substituants méthyle, représenter tous les isomères les plus stables.
- Donner leurs noms dans la nomenclature systématique en précisant la position spatiale des substituants.

B / Soit le composé de formule brute C_8H_{18} .

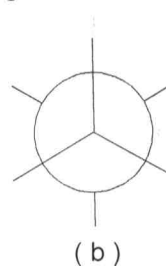
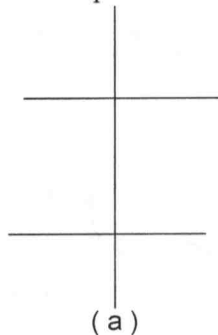
- Donner la formule développée de la molécule présentant deux carbones asymétriques.
- Représenter les couples d'énantiomère et de diastéréoisomères. Que remarque-t-on ?

EXERCICE 4 (3pts)

Soit la molécule suivante

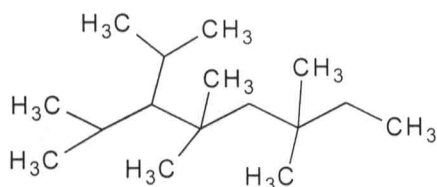


- Donner les configurations absolues des centres chiraux.
- Compléter les projections suivantes de façon que la molécule ci-dessus forme un couple d'énantiomère avec (a) et un couple de diastéréoisomère avec (b).

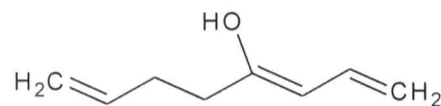


.Corrigé
Partiel

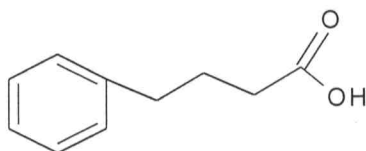
EXERCICE 1



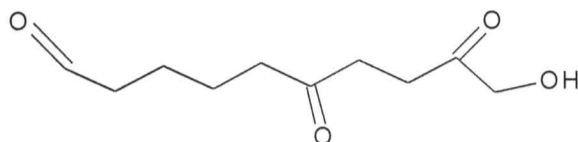
3 - (1 - methylethyl) - 2 , 4 , 4 , 6 , 6 - pentamethylotane



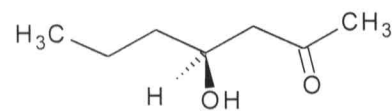
(3Z)-octa-1,3,7-trien-4-ol



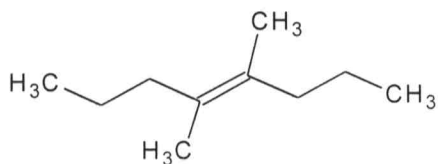
4-phenylbutanoic acid



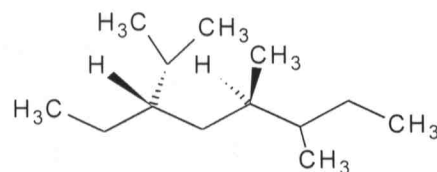
10-hydroxy-6,9-dioxodecanal



(4S)-4-hydroxyheptan-2-one

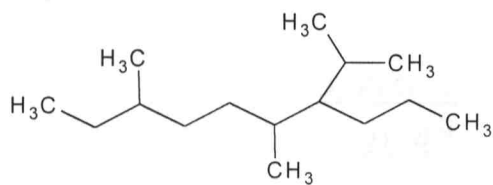


(4E)-4,5-dimethyloct-4-ene

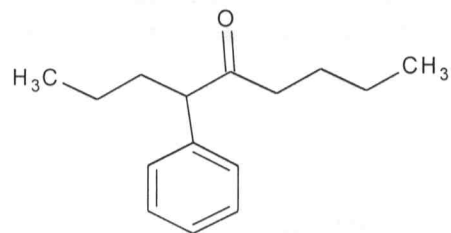


(3S,5R)-3-ethyl-2,5,6-trimethyloctane

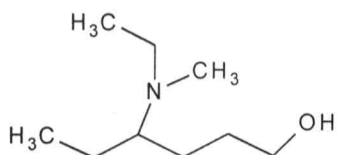
EXERCICE 2



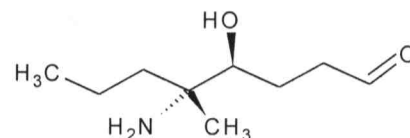
7-isopropyl-3,6-dimethyldecane



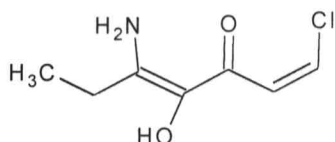
4-phenylnonan-5-one



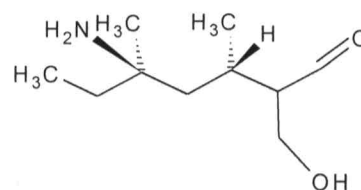
4-(N-ethyl-N-ethylamino)hexan-1-ol



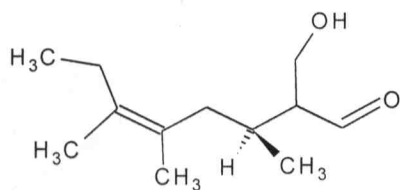
(4*S*,5*R*)-5-amino-4-hydroxy-5-methyloctanal



(1*Z*,4*E*)-5-amino-1-chloro-4-hydroxyhepta-1,4-dien-3-one



(3*S*,5*R*)-5-amino-2-(hydroxymethyl)-3,5-dimethylheptanal



(3*S*,5*Z*)-2-(hydroxymethyl)-3,5,6-trimethyloct-5-enal

