

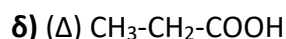
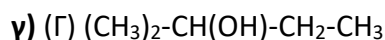
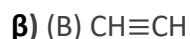
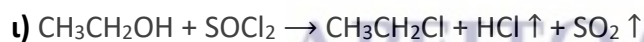
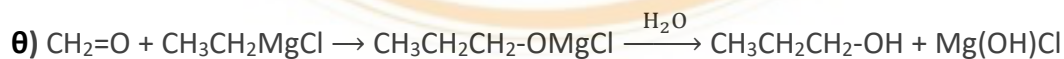
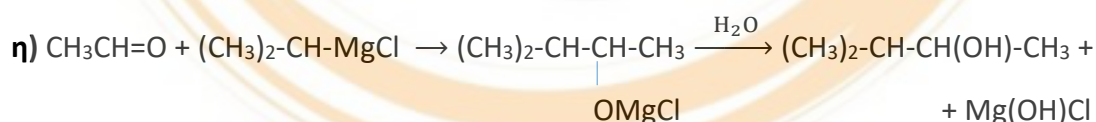
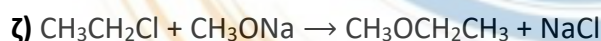
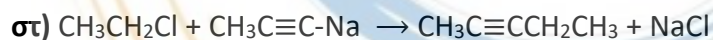
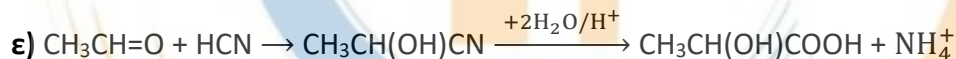
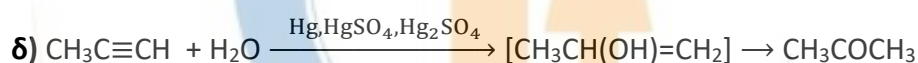
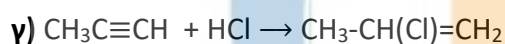
**ΕΝΔΕΙΚΤΙΚΕΣ ΑΠΑΝΤΗΣΕΙΣ ΔΙΑΓΩΝΙΣΜΑΤΟΣ
ΧΗΜΕΙΑΣ Β' ΓΕΝΙΚΟΥ ΛΥΚΕΙΟΥ**

**ΕΠΙΜΕΛΕΙΑ ΔΙΑΓΩΝΙΣΜΑΤΟΣ: ΑΓΓΕΛΑΚΟΠΟΥΛΟΣ ΜΑΡΙΝΟΣ –
ΓΡΗΓΟΡΟΠΟΥΛΟΣ ΔΗΜΗΤΡΗΣ – ΤΣΑΚΑΝΙΑ ΜΑΡΙΑ – ΦΡΑΣΕΡΙ ΜΑΡΙΝΑ**

ΘΕΜΑ Α

A1. β A2. δ A3. β A4. γ A5. γ

ΘΕΜΑ Β



ΘΕΜΑ Γ

Γ1. (A) $\text{CH}_3\text{CH}=\text{CH}_2$ (B) $\text{CH}_3-\text{CH}(\text{OH})-\text{CH}_3$ (Γ) $(\text{CH}_3)_2-\text{CH}-\text{Cl}$ (Δ) $(\text{CH}_3)_2-\text{CH}-\text{MgCl}$
(E) $\text{Br}-\text{CH}_2-\text{CH}_2-\text{Br}$ (Z) $\text{CH}\equiv\text{CH}$ (H) $\text{CH}_3\text{CH}=\text{O}$ (I) $\text{CH}_3-\text{CH}(\text{OH})-\text{CH}-(\text{CH}_3)_2$

Γ2. (A) C_vH_{2v} (Γ) $\text{C}_v\text{H}_{2v+1}\text{Cl}$ (Δ) $\text{C}_v\text{H}_{2v+1}\text{MgCl}$ (B) $\text{C}_k\text{H}_{2k-2}$ (E) $\text{C}_k\text{H}_{2k}\text{O}$
(Z) $\text{C}_{v+k}\text{H}_{2v+2k+1}\text{OH}$: $v + k = 5$ (1) με $v \geq 2$, $k \geq 2$

Αν $k = 3 \Rightarrow$ (E) κετόνη και (Z) 3^0 αλκοόλη: δεν μπορεί να προκύψει με υδρογόνωση της καρβονυλικής (Θ). Απορρίπτεται.

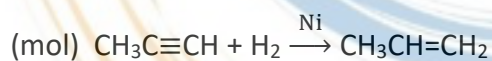
Άρα: $v = 3$ και $k = 2$. Οπότε:

(A) $\text{CH}_3-\text{CH}=\text{CH}_2$ (Γ) $\text{CH}_3-\underset{\text{Cl}}{\text{CH}_2}-\text{CH}_3$ (Δ) $\text{CH}_3-\underset{\text{MgCl}}{\text{CH}}-\text{CH}_3$ (B) $\text{CH}\equiv\text{CH}$ (E) $\text{CH}_3-\text{CH}=\text{O}$

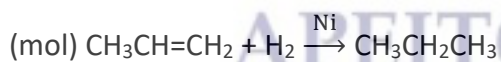
(Z) $\text{CH}_3-\text{CH}(\text{OH})-\text{CH}-(\text{CH}_3)_2$ (Θ) $\text{CH}_3-\text{CO}-\text{CH}-(\text{CH}_3)_2$ (Λ) $(\text{CH}_3)_2-\underset{\text{OH}}{\text{CH}}-\overset{\text{CH}_3}{\text{C}}-\text{COOH}$

ΘΕΜΑ Δ

Δ1. α) $\text{CH}_3\text{C}\equiv\text{CH}$: $n = \frac{m}{M_r} = \frac{4}{40} = 0,1 \text{ mol}$, H_2 : $n = \frac{m}{M_r} = \frac{0,3}{2} = 0,15 \text{ mol}$



αρχ.	0,1	0,15	-
αντ./παρ.	-0,1	-0,1	+0,1
τελ.	-	0,05	0,1



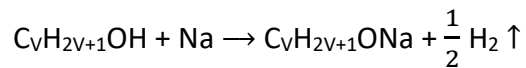
αρχ.	0,1	0,05	-
αντ./παρ.	-0,05	-0,05	+0,05
τελ.	0,05	-	0,05

Τελική σύσταση: $0,05 \text{ mol CH}_3\text{CH}=\text{CH}_2$, $0,05 \text{ mol CH}_3\text{CH}_2\text{CH}_3$

β) $n_{\text{αλκενίου}} = n_{\text{Br}_2} = 0,05$

$C = n/V \leftrightarrow V = n/C = 0,1 \text{ L}$

$$\Delta 2. \alpha) (A) C_v H_{2v+1} OH: n = \frac{m}{M_r} = \frac{14,8}{14v+18} \text{ mol}, \quad H_2: n = \frac{V}{V_m} = \frac{2,24}{22,4} = 0,1 \text{ mol}$$

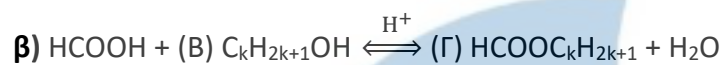


$$1 \text{ mol} \qquad \qquad \qquad 0,5 \text{ mol}$$

$$\frac{14,8}{14v+18} \text{ mol} \qquad \qquad \qquad 0,1 \text{ mol}$$

$$0,5 \cdot \frac{14,8}{14v+18} = 0,1 \Rightarrow 5 \cdot \frac{14,8}{14v+18} = 1 \Rightarrow 74 = 14v + 18 \Rightarrow 56 = 14v \Rightarrow v = 4.$$

Η αλκοόλη είναι 3⁰ (δεν αποχρωματίζει διάλυμα KMnO₄): (CH₃)₃-C-OH



$$M_r(\Gamma) = 102 \Rightarrow 14k + 46 = 102 \Rightarrow 14k = 56 \Rightarrow k = 4.$$

(B) 2⁰ αλκοόλη (με οξείδωση δίνει κετόνη): CH₃-CH(OH)-CH₂-CH₃

Τελικά: (B) CH₃-CH(OH)-CH₂-CH₃ (Γ) HCOOCHCH₂CH₃ (Δ) CH₃-CO-CH₂-CH₃

$$\Delta 3. (A) C_v H_{2v-2}: n = \frac{m}{M_r} = \frac{0,8}{14v-2} \text{ mol}, \quad Br_2: n = CV = 0,2 \cdot 0,2 = 0,04 \text{ mol}$$



$$1 \text{ mol} \quad 2 \text{ mol}$$

$$\frac{0,8}{14v-2} \text{ mol} \quad 0,04 \text{ mol}$$

$$2 \cdot \frac{0,8}{14v-2} = 0,04 \Rightarrow 1,6 = 0,04(14v - 2) \Rightarrow 40 = 14v - 2 \Rightarrow 42 = 14v \Rightarrow v = 3.$$

CH₃C≡CH (A)

ΑΡΕΙΤΟΛΜΟ

Δάφνη - Αγ. Δημήτριος