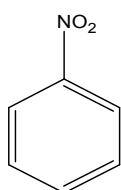
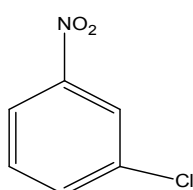


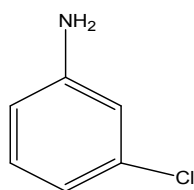
A. Câte 1 punct A, B, C, D, E, F, J', J câte 2 puncte G, H, I, și miconazol



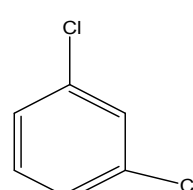
A



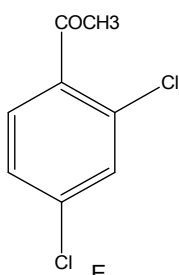
B



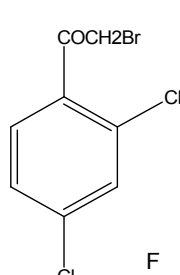
C



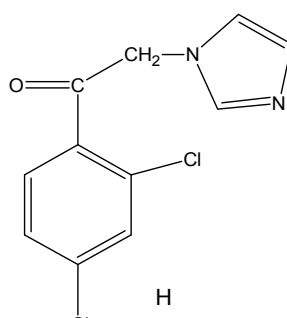
D



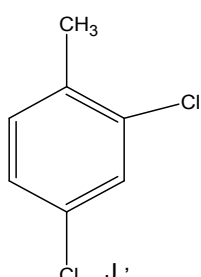
E



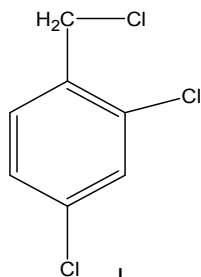
F



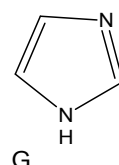
H



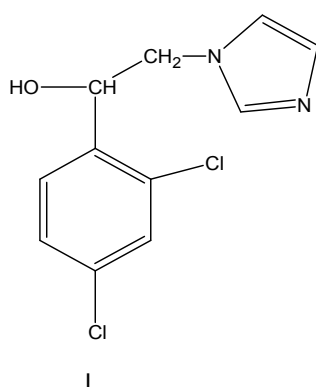
J'



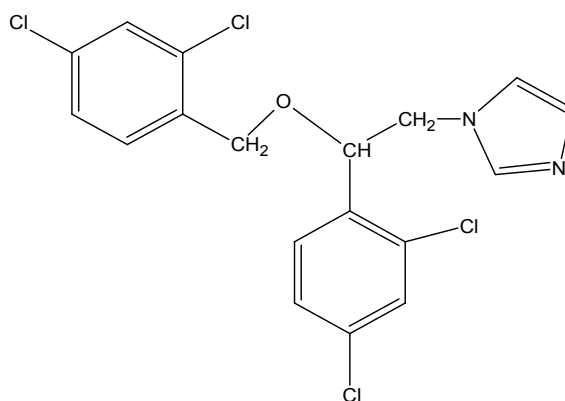
J



G



I



Miconazol

16
puncte

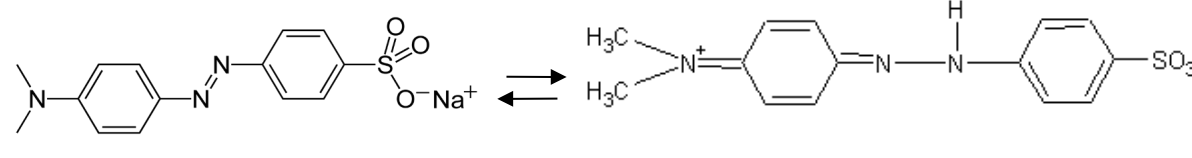
B. izomer dextro- izomer levo= 82% - 18% = 64%
 $\alpha = + 18,6 \cdot 64 / 100 = + 11,99^\circ$

9
puncte

Subiectul III 25 puncte

A. a) C₆H₁₄; 3 – metil pentan

5
puncte

b) 11,73% $\text{CH}_3\text{-CH}_2\text{-CCl(CH}_3\text{)-CH}_2\text{-CH}_3$; 34,43% $\text{CH}_3\text{-CHCl-CH(CH}_3\text{)-CH}_2\text{-CH}_3$; 7,94% $\text{CH}_3\text{-CH}_2\text{-CH(CH}_2\text{Cl)-CH}_2\text{-CH}_3$; 15,89% $\text{CH}_2\text{Cl-CH}_2\text{-CH(CH}_3\text{)-CH}_2\text{-CH}_3$; 30% $\text{CH}_3\text{-CH}_2\text{-CH(CH}_3\text{)-CH}_2\text{-CH}_3$	15 puncte
B. $\eta = 14,92\% \leftarrow$;	5 puncte
Subiectul IV..... 30 puncte	
A. a) $2 \text{ C}_6\text{H}_5\text{-OH} + \text{CH}_3\text{-CO-CH}_3\text{HO} \longrightarrow \text{C}_6\text{H}_4\text{-C(CH}_3\text{)}_2\text{-C}_6\text{H}_4\text{-OH} + \text{H}_2\text{O}$ 2,2-(p,p'-dihidroxi-difenil) propan	2 puncte
b) $m_{\text{fenol pur}} = 70,75 \text{ g (C}_t\text{)}$; $C_p = 62,4 \text{ g fenol}$; $75,68 \text{ g bisfenol}$;	4 puncte
c). $\text{HO-C}_6\text{H}_4\text{-C(CH}_3\text{)}_2\text{-C}_6\text{H}_4\text{-OH} + 2\text{NaOH} \longrightarrow {}^+\text{Na}^+\text{O-C}_6\text{H}_4\text{-C(CH}_3\text{)}_2\text{-C}_6\text{H}_4\text{-O}^-\text{Na}^+ + 2\text{H}_2\text{O}$ $0,664 \text{ moli NaOH}$; $V = 0,265 \text{ L NaOH}$.	4 puncte
B. a) $\text{C}_6\text{H}_6 \longrightarrow \text{C}_6\text{H}_5\text{-NO}_2 \longrightarrow \text{C}_6\text{H}_5\text{-NH}_2 \longrightarrow \text{H}_2\text{N-C}_6\text{H}_4\text{-SO}_3\text{H(p)}$ $\text{H}_2\text{N-C}_6\text{H}_4\text{-SO}_3\text{H(p)} \longrightarrow {}^+\text{Na}^+\text{O}_3\text{S-C}_6\text{H}_4\text{-N}\equiv\text{N}^+\text{Cl}^-$ $\text{C}_6\text{H}_5\text{-NH}_2 + 2 \text{CH}_3\text{Cl} \longrightarrow \text{C}_6\text{H}_5\text{-N(CH}_3\text{)}_2 + 2 \text{HCl}$	4 puncte
b) ${}^+\text{Na}^+\text{O}_3\text{S-C}_6\text{H}_4\text{-N}\equiv\text{N}^+\text{Cl}^- + \text{C}_6\text{H}_5\text{-N(CH}_3\text{)}_2 \longrightarrow {}^+\text{Na}^+\text{O}_3\text{S-C}_6\text{H}_4\text{-N=N-C}_6\text{H}_4\text{-N(CH}_3\text{)}_2 + \text{HCl}$ metiloranj	2 puncte
c)  forma azoidă $\xrightleftharpoons{-\text{H}^+}$ forma chinoidă	5 puncte
d) 1 moli acid sulfanilic; 1 mol NaNO_2 ; 0,8595 moli N,N-dimetilanilina; $m_{\text{colorant teoretic}} = 281,06 \text{ g}$; $m_{\text{colorant practic}} = 278,25 \text{ g}$.	5 puncte
e) 0,0001 g indicator; $0,306 \text{ cm}^3 \text{HCl}$.	4 puncte

Barem elaborat de Carmen Gina Ciobîcă, profesor la Colegiul Tehnic de Industrie Alimentară Suceava