



OLIMPIADA NAȚIONALĂ DE CHIMIE TÂRGOVIȘTE, 19-24 aprilie 2017 Ediția a I-a

Barem de evaluare și de notare Proba teoretică Clasa a X –a

Se punctează orice modalitate de rezolvare corectă a cerințelor.

Subiectul I (20 puncte)

1 E; 2 C; 3 D; 4 D; 5 B; 6 B; 7 C; 8 E; 9 C; 10 E.
Fiecare răspuns corect primește 2 puncte

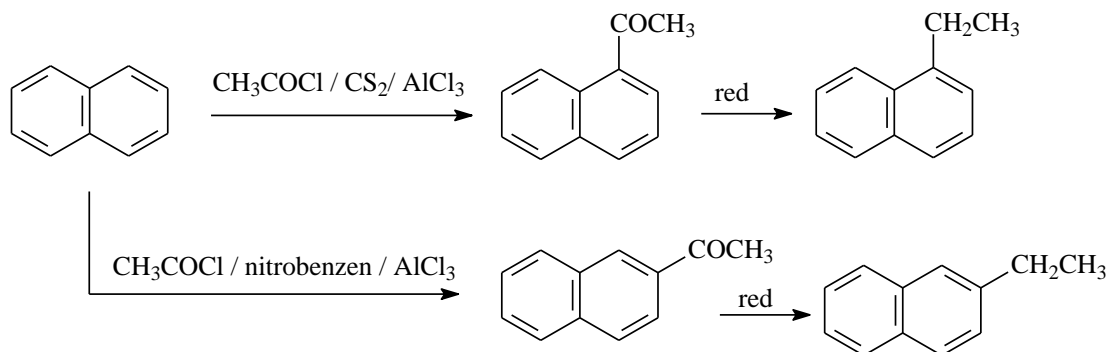
Subiectul al II-lea (25 puncte)

A. Formula brută C_4H_7 2 puncte
Formula moleculară C_8H_{14} 2 puncte



2 structuri X 3 puncte
Total 10 puncte

B.



2 sinteze X 4 puncte

Eventual alchilarea în poziția 1 se va puncta cu 3 puncte.

Total 8 puncte

C.

A izopren

Sinteză Diels – Alder (dien)

Diena

Filodiena reprezentată corect

2 puncte

2 puncte

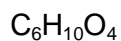
1,5 puncte

1,5 puncte

Total 7 puncte

Subiectul al III-lea**(25 puncte)****A.**

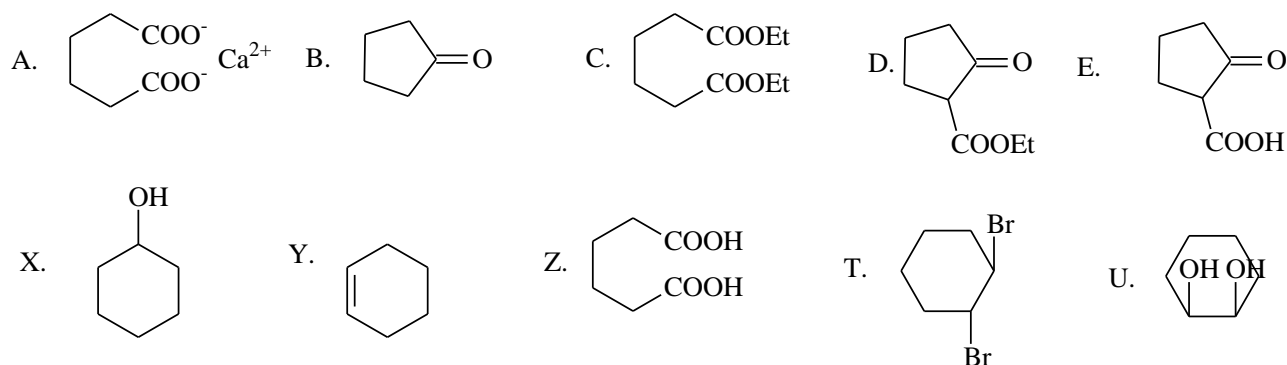
Formula moleculară Z



2 puncte

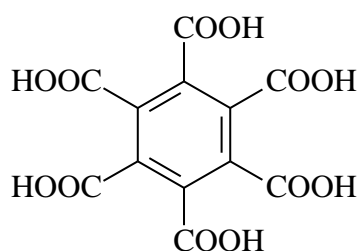
10 formule a câte 0,5 puncte

5 puncte

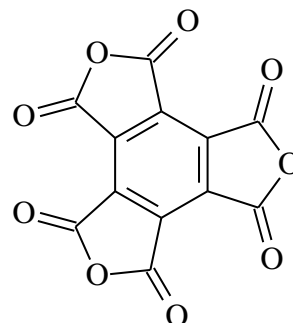
V = 40mL soluție $K_2Cr_2O_7$

3 puncte

Total 10 puncte

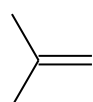
B.**M**

4 puncte

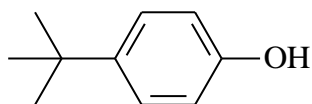
**N**

2 puncte

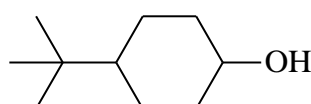
Total 6 puncte

C.

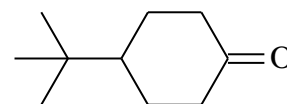
A



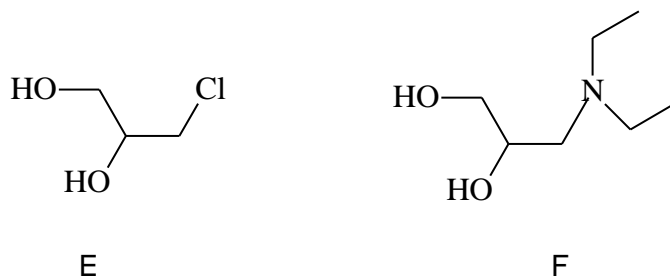
B



C



D



6 formule x 1,5 puncte

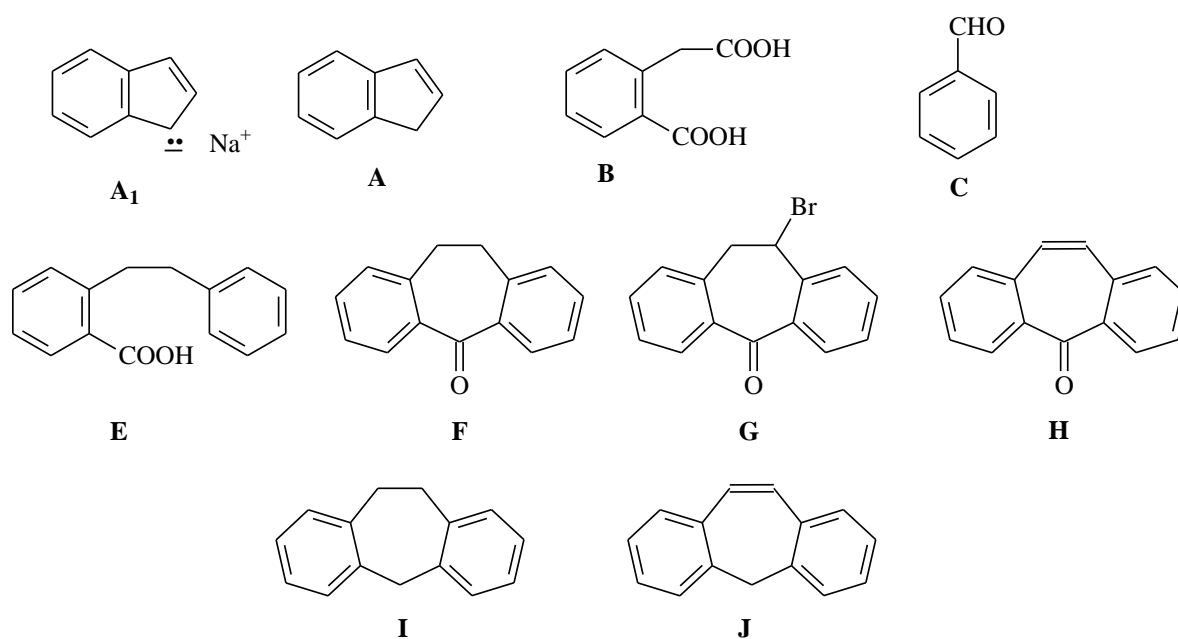
9 puncte

Subiectul al IV-lea (30 puncte)

A.

Formule de structură A, A1, B, C, E, F, G, H, I, J 10 formule x 1 p

10 puncte



F → I Zn + HCl sau N₂H₄ /KOH 2 puncte

H → J N₂H₄ /KOH (Kijner-Wolff) 2 puncte

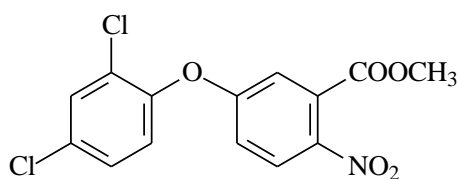
Caracter aromatic au A1 și H 2 x 1punct 2 puncte

A1 10 electroni π 1 punct

H 14 electroni π 1 punct

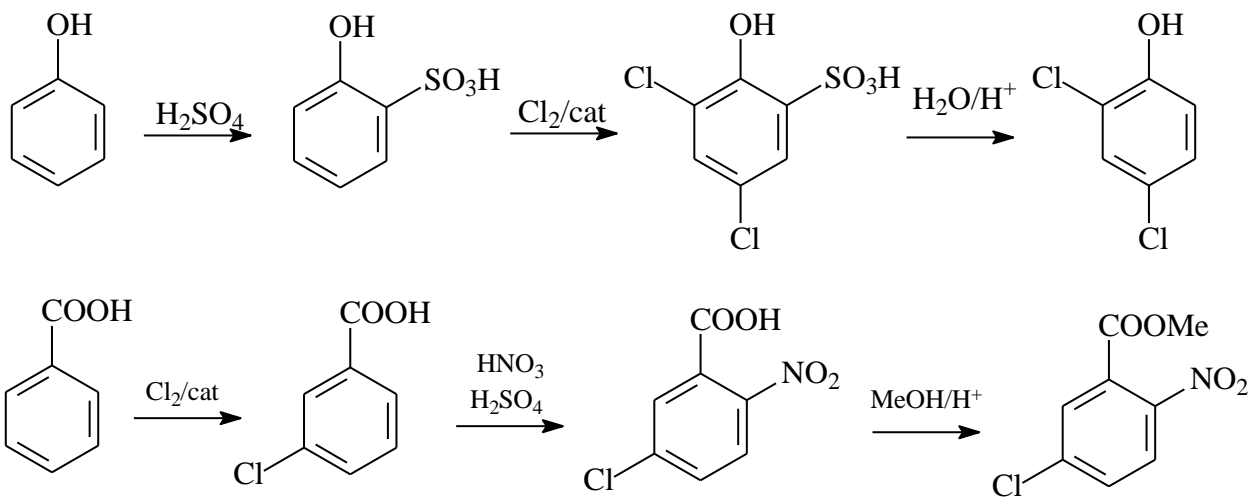
Total 18 puncte

B.



Bifenox

3 puncte



6 reacții x 1,5 puncte

9 puncte

Total 12 puncte

ATENȚIE: Orice variantă de rezolvare corectă se va lua în considerare!!