

OLIMPIADA NAȚIONALĂ DE CHIMIE

DEVA, 2-7 aprilie 2023
Ediția a LVI-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 de puncte)

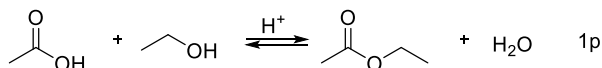
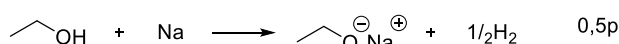
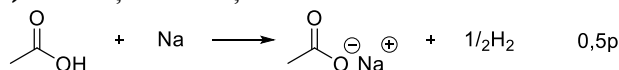
1 C; 2 E; 3 E; 4 D; 5 A; 6 B; 7 E; 8 C; 9 E; 10 D.

Fiecare răspuns corect primește 2 puncte

Subiectul al II-lea (25 de puncte)

A. 10 p distribuite astfel:

a) Ecuațiile reacțiilor chimice



b) Calculul compoziției procentuală molară

Determinarea corectă a numărului de mmoli de etanol, acid acetic și apă 6p

1 mmol etanol, 1 mmol acid acetic, 3,2 mmol apă

Determinarea corectă a compoziției 1,5p

19,23% etanol, 19,23% acid acetic, 61,53% apă

2,5 p

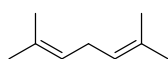
7,5 p

B. 15 p distribuite astfel:

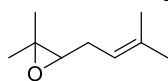
a) 4 structuri – A 1p, D, E, F 3 x 3p



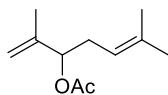
A



D



E

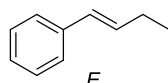
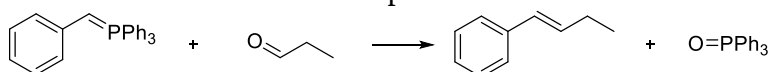


F

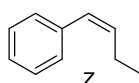
10 p

b) Ecuația reacției chimice – 3p

Structura stereoizomerilor – 2p

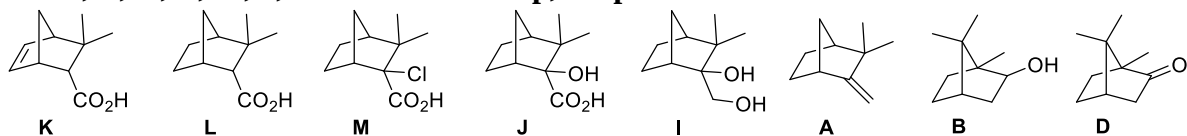
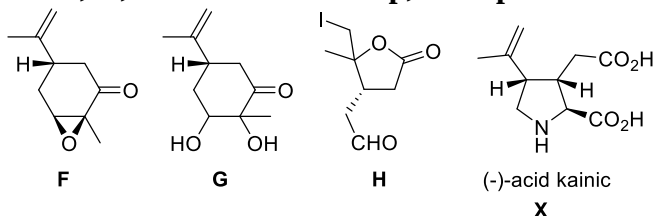
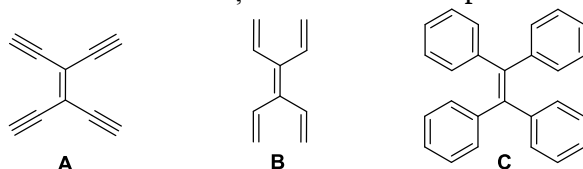
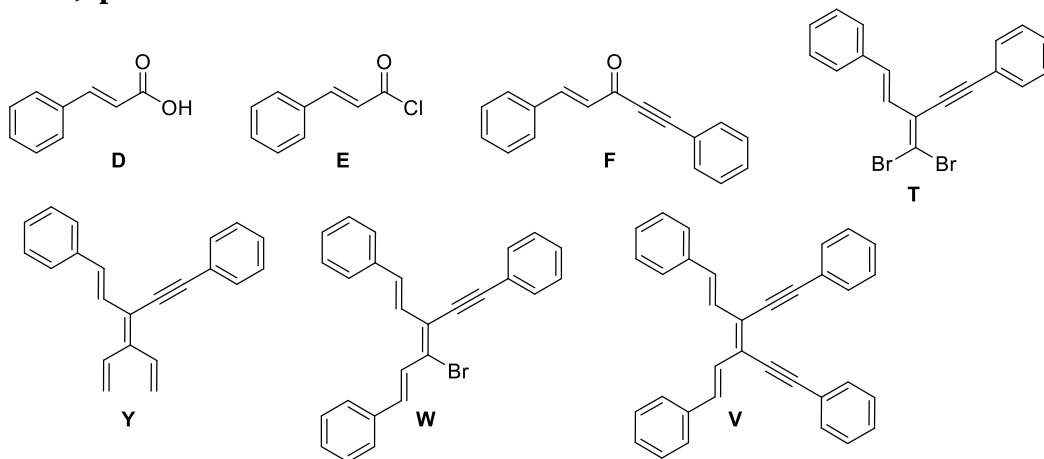
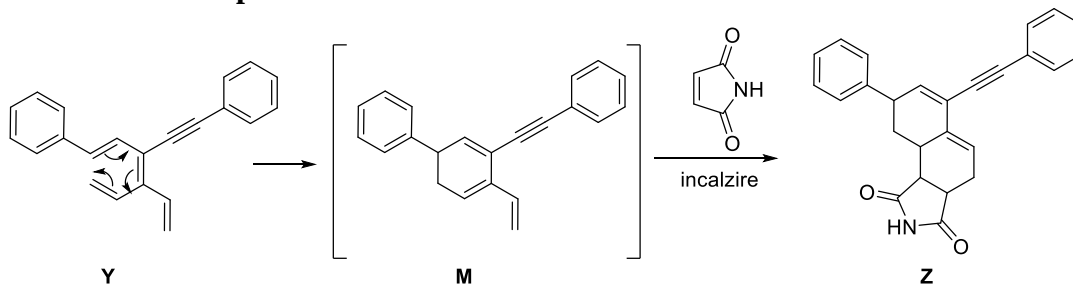


E



Z

5p

Subiectul al III-lea
(25 de puncte)
A. 15 p distribuite astfel:
A, B, K, L, M, J, I - 7 structuri x 2p, D 1p

15 p
B. 10 p distribuite astfel:
F, G, H = 3 structuri x 2p, X = 4p

10 p
Subiectul al IV-lea
(30 de puncte)
30 p distribuite astfel:
a) Calcul NE corect și 3 structuri 3 x 3p

9 p
b) Configurație E pentru fiecare dintre cele trei legături duble – 1,5p
1,5p
c) 6 structuri (D, E, F, T, Y, W) - 6 x 2p
V – 2,5p

14,5p
d) Structura M – 2p
Structura Z – 3p

5p