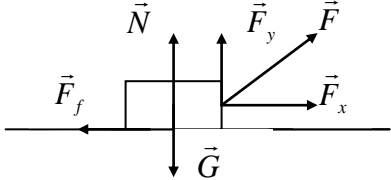


Barem de corectură
A.MECANICĂ

Nr. subiect	Soluție	Punctaj
I.1.	c	2p
I.2.	c	2p
I.3.	b	3p
I.4.	b	4p
I.5.	a	4p
	Total pentru Subiectul I.	15puncte
II.a	 <p> $F_n = N$, $N + F_y - G = 0$, $G = mg$ $N = mg - F_y$ $F_y = F \sin \alpha$ $F_n = mg - F \sin \alpha$ $F_n = 11,35 \text{ N}$ </p>	<p>1p</p> <p>1p 4p</p> <p>1p</p>
II.b	$F_x - F_f = ma$ $F_x = F \cos \alpha$ $F_f = \mu F_n$ $a = \frac{F \cos \alpha - \mu F_n}{m}$, $a = 0,8 \text{ m/s}^2$	<p>1p</p> <p>2p 4p</p> <p>1p</p>
II.c	$v = v_0 + a \Delta t$ $v_0 = 0 \text{ m/s}$ $v = a \Delta t$ $v = 12 \text{ m/s}$	3p
II.d	$v_f = v + a_1 \Delta t_0$ $v_f = 0 \text{ m/s}$ $\Delta t_0 = -\frac{v}{a_1}$ $-F_f = ma_1$ $F_f = \mu N_1$ $N_1 = mg$ $a_1 = -\mu g$ $\Delta t_0 = v / \mu g$ $\Delta t_0 = 4 \text{ s}$	<p>1p</p> <p>1p 4p</p> <p>1p</p>
	Total pentru Subiectul II.	15puncte
III.a	$L = F_t \cdot d$ $V = \text{const.}$ $a = 0 \text{ m/s}^2$ $F_t - F_r = 0$ $F_r = fmg$ $L = fmgd$ $L = 5 \cdot 10^6 \text{ J}$	<p>1p</p> <p>2p 4p</p> <p>1p</p>
III.b	$P = F_t \cdot v_m$ $v_m = v = \text{const.}$ $P = fmgv$ $v = P / fmg$ $v = 20 \text{ m/s}$	<p>1p</p> <p>2p 3p</p>
III.c	$E_c = mv^2/2$ $E_c = 2 \cdot 10^5 \text{ J}$	3p
III.d	$\Delta E_c = L$ $L = -F_r d_0$ $E_{cf} - E_c = -F_r d_0$ $E_{cf} = 0 \text{ J}$ $d_0 = E_c / fmg$ $d_0 = 80 \text{ m}$	<p>2p</p> <p>1p 5p</p> <p>1p</p> <p>1p</p>
	Total pentru Subiectul III.	15puncte

Orice soluție corectă se punctează