

## Popravni prvog redovnog kolokvijuma iz Tehničke fizike 1

1. a)  $\vec{v}(t) = (3 \cdot A \cdot t^2 + 2 \cdot B \cdot t + C) \cdot \vec{e}_x$   
 $\vec{a}(t) = (6 \cdot A \cdot t + 2 \cdot B) \cdot \vec{e}_x$ , b)  $t_{z1} = 0,63\text{s}, t_{z2} = 1,59\text{s}$ , c)  $v_{sr} = 1,42\text{m/s}$ .

2. a)  $\theta = 32,1^\circ$ , b)  $\frac{h_{\max 1}}{h_{\max 2}} = 1,77$ , c)  $\frac{t_{\text{uk1}}}{t_{\text{uk2}}} \approx 1$ .

3. videti IRK 2020

4. videti Jul 2021

5. a)  $\frac{\rho_M}{\rho_Z} = \frac{d_Z^3}{9 \cdot d_M^3} = 0,74$ , b)  $g_{0M} = \frac{1}{9} \cdot g_0 \cdot \left(\frac{d_Z}{d_M}\right)^2 = 3,94\text{m/s}^2$ , c)  $\frac{v_M}{v_Z} = \frac{1}{3} \cdot \sqrt{\frac{d_Z}{d_M}} = 0,46$ .

24.6.2022.

**Popravni drugog redovnog kolokvijuma iz Tehničke fizike 1**

1. a)  $\frac{M}{m} = \frac{25}{4}$ , b)  $v_0 = 5 \cdot \sqrt{\frac{g \cdot L}{3}}$ .

2. videti Sep 2021;  $\frac{T_2}{T_1} = 2,4$

3. videti Jul 2021; c)  $\Delta f_a = 50,13 \text{ Hz}$ ,  $\Delta f_b = 45,11 \text{ Hz}$ .

4. videti IIRK 2021; a)  $h_1 = 29,14 \text{ cm}$ , b)  $t_1 = 123 \text{ s}$ , c)  $Q_m = 8,13 \text{ g/s}$ .

5. videti Z4 iz Termodinamike 2; a)  $A = 8 \text{ kJ}$ , b)  $\eta = 34,7\%$ .