

## 物 理

志望学科 又は 志望分野 又は 志望コース

得 点

## 問題1

(1)  $F = \mu' mg$  [N]

(2)  $a = \mu' g$  [m/s<sup>2</sup>]

(3)  $v' = \sqrt{v_0^2 - 2\mu'gL}$  [m/s]

(4)  $V = \frac{m}{m+M}v'$  [m/s]

(5)  $T = (m+M)g + (m+M)\frac{V^2}{R}$  [N]

(6)  $\frac{V'^2}{R} - g \geq 0$

(7)  $v_0 \geq \sqrt{\frac{5(m+M)^2 gR}{m^2} + 2\mu'gL}$

## 問題2

(1)

$$qE$$

[N]

(2)

$$qEa$$

[J]

(3)

$$\sqrt{v_0^2 + \frac{2qEL_1}{m}}$$

[m/s]

(4)

$$\frac{V}{d}$$

[N/C]

(5)

$$\frac{qV}{md}$$

[m/s<sup>2</sup>]

(6)

$$\frac{qVb^2}{2mdv_1^2}$$

[m]

(7)

$$\frac{md^2v_1^2}{qL_2^2}$$

[V]