

[I] (i) (1) (イ) (2) (ケ) (3) (キ) (4) (ソ) (5) (チ) (a) 34

(ii) (6) (ア) (7) (カ) (8) (シ) (9) (ア) (10) (ケ) (11) (カ)

(12) (ソ) (13) (オ) (14) (ケ) (15) (ア) (b) $mv = mv_1 + 3mv_2$ (c) $\frac{v}{2} \sqrt{\frac{3m}{k}}$

[II] (i) (1) (イ) (2) (ク) (3) (コ) (4) (セ) (5) (チ) (6) (ナ) (a) $\frac{eV}{kD}$

(ii) (7) (ア) (8) (ウ) (9) (ク) (10) (コ) (11) (エ) (12) (オ) (b) Bd (c) $\frac{mgL}{(Bd)^2}$

[III] (i)(A)(1) (ウ) (2) (カ) (3) (イ) (4) (ス) (a) $\frac{1}{2f_1}$

(B)(5) (イ) (6) (シ)

(C)(7) (エ)

(ii) (8) (オ) (9) (エ) (10) (ウ) (11) (ソ) (12) (キ) (b) 58 (c) 核力

(iii) (13) (オ) (14) (イ) (15) (コ)