

## Example Answers

International Master's Programs of Chemical Engineering in the Graduate School of Engineering,  
Kyushu University (Academic Year from April, 2026)

科目 / Subject : プロセス制御 / Process Control (1枚 / 1 sheet)

(1.1) 一次遅れ要素 first-order lag element (first-order system)

$$(1.2) \quad \frac{4}{(s+2)^3} \left( K_p + \frac{K_I}{s} \right)$$

$$(1.3) \quad \frac{(sK_p + K_I)(s+2)^2}{4(sK_p + K_I) + s(s+2)^3}$$

$$(1.4) \quad K_p = 16$$

$$(1.5) \quad 0.2$$

$$(1.6) \quad 0$$