4.2. $\dot{A}_u = \frac{-3.16\,j\frac{f}{10}}{(1+j\frac{f}{10})(1+j\frac{f}{10^5})}$

4.4 (1) 直接耦合

(2) 三级

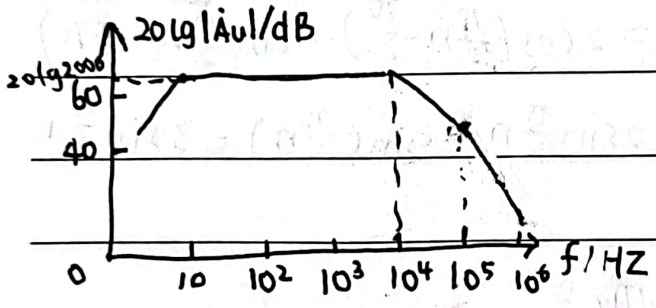
(3) -135°, -270°

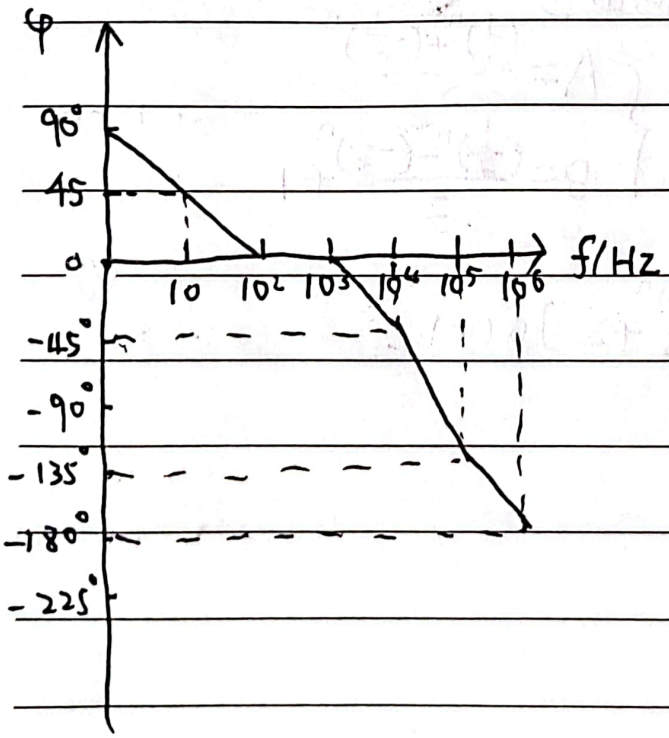
(4) $f_H \approx \frac{f_{H1}}{1.1\sqrt{3}} \approx 0.52 f_{H1} = 5200\,Hz$

4.6 $\dot{A}_u = \dot{A}_{um} \cdot \frac{j\frac{f}{f_L}}{(1+j\frac{f}{f_L})(1+j\frac{f}{f_{H1}})(1+j\frac{f}{f_{H2}})}$

$\therefore \dot{A}_u = \frac{2000 \cdot j\frac{f}{10}}{(1+j\frac{f}{10})(1+j\frac{f}{10^4})(1+j\frac{f}{10^5})}$, $\therefore \dot{A}_{um} = 2000$

$f_L = 10\,Hz$, $f_H = 10^4$





4.8. (1) a

(2) d

(3) d

4-12. $\dot{A}um = \frac{\dot{U}_o}{\dot{U}_i} = \frac{-g_m \dot{U}_{gs}(R_d // R_L)}{\dot{U}_{gs}} = -g_m R_L' = -50$

$f_H = \frac{1}{2\pi R_g C_{gs}'} = 382.6\ Hz$

$f_L = \frac{1}{2\pi(R_d + R_L)C} = 0.7958\ Hz$