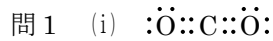
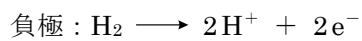
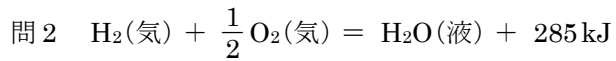


I

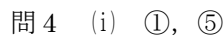
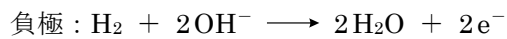
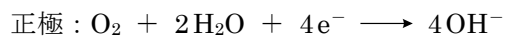


(ii) 1.72×10^4 年

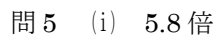
(iii) 臨界点よりも温度が高く、かつ、圧力が高くなる。(23字)



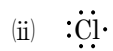
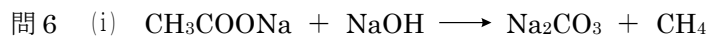
または



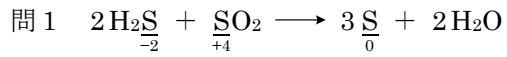
(ii) メタン: ④ アンモニア: ⑤ アセチレン: ①



(ii) 1.7×10^2 倍



II



問2 (i) $4.3 \times 10^{-2} \text{ mol}$

(ii) $3.0 \times 10^{-9} \text{ mol}$

問3 ア : ① イ : ④

問4 (i) ②

(ii) $\text{pH} = 5.00^{(\text{注})}$ $[\text{S}^{2-}] = 3.0 \times 10^{-14} \text{ mol/L}$

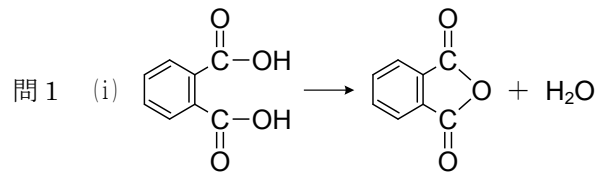
問5 (i) $[\text{H}^+] = \sqrt{\frac{K_1 K_2 [\text{M}^{2+}] [\text{H}_2\text{S}]}{K_{\text{sp}}}}$

(ii) 範囲 : $1.00 < \text{pH} \leq 4.50^{(\text{注})}$ 沈殿する硫化物 : CuS

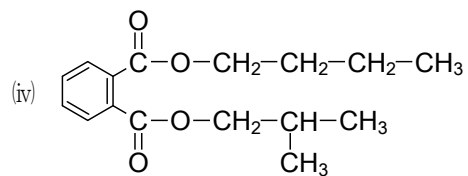
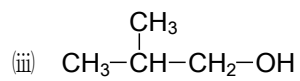
(注) 常用対数の有効数字の桁数は小数点以下の桁数である。ただし、次の解答も正解にしたものと思われる。

問4 (i) $\text{pH} = 5.0$ 問5 (ii) 範囲 : $1.0 < \text{pH} \leq 4.5$

III



(ii) 第一級アルコール

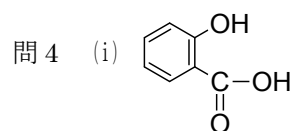


問2 $8.0 \times 10 \text{ mg}$

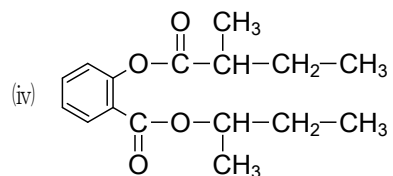
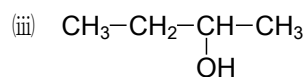
問3 (i) 7

(ii) 5

(iii) 4



(ii) 気体: CO_2 官能基: カルボキシ基



問5 ③