

Group: 35

भारतीय प्रौद्योगिकी संस्थान मुंबई  
INDIAN INSTITUTE OF TECHNOLOGY BOMBAY

उत्तर पुस्तिका/ Answer Book-4

210110116 / 210110101  
रोल नं./Roll No.

MM 202

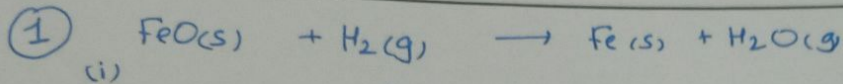
MEMS

पाठ्यक्रम नाम/Course Name

S2

शाखा/प्रभाग/Branch/Div. शैक्षणिक बैच /Tutorial Batch

अनुभाग/Section

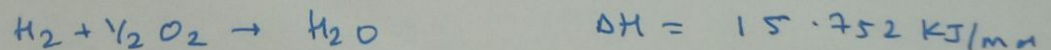
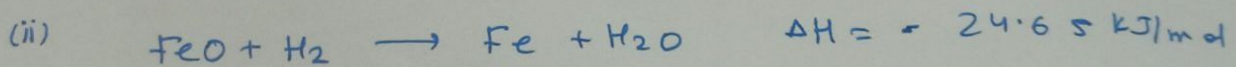


$1 \text{ ton} = 10^6 \text{ grams}$

$n_{\text{Fe}} = \frac{10^6}{56} = n_{\text{H}_2}$

$1 \text{ mole} \rightarrow 22.414 \times 10^{-3} \text{ Nm}^3$

$n_{\text{H}_2} \rightarrow \frac{10^6}{56} \times 22.414 \times 10^{-3} \text{ Nm}^3 = \boxed{400.25 \text{ Nm}^3}$



$(15.752) \times \frac{10^6}{56} = (24.65) \times n_{\text{H}_2}$

$n_{\text{H}_2} = \frac{V_{\text{H}_2}}{22.414 \times 10^{-3}}$

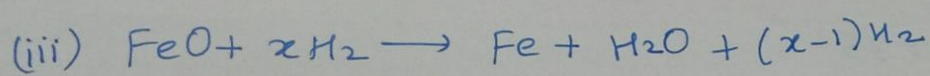
$V_{\text{H}_2} = n_{\text{H}_2} \times 10^{-3} \times 22.414$

$V_{\text{H}_2} = 255.77 \text{ Nm}^3$

$V_{\text{H}_2} = V_{\text{O}_2} = \frac{127.88 \text{ Nm}^3}{2}$

12.4

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$$\frac{0.7357}{0.2643} = \frac{(x-1)}{1}$$

$$x = 3.78$$

PTO

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$$PV = nRT$$

- ③ There is dissolved air in water which contains nitrogen and oxygen. When water freezes the water molecules push out the air molecules and air gets trapped in the cube causing air bubbles inside.