

Soln / marking scheme

sub: - ECMB [Env. chem. & micro. Biology]

CNPA 11182

Q1) a) $\alpha = \sqrt{\frac{K_b}{c}} = \sqrt{\frac{3.2 \times 10^{-2}}{0.05}} = 0.03$

(4)

P118-122 (T1)

b) Dulong's formula

$$\text{BTU/lb} = 145 + 610(\text{H} - 1/8\text{O}) + 405 + 10\text{H}$$

$$= 43200 \text{ BTU/lb}$$

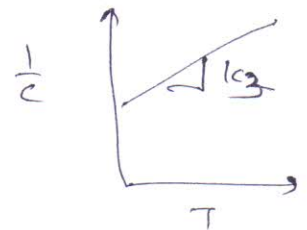
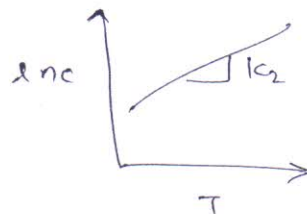
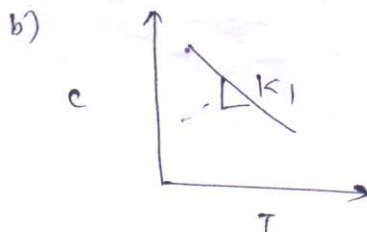
Q2) a) $PA = H \times A$

$$x_A = PA / HA = \text{mole gas / mole H}_2\text{O}$$

b) Alkanes — 3m
~~Q2) a)~~ Alkanes — 3m

Q3) a) $W = 2 \times I \times t$ $Z = \frac{130 \times 10^3}{96500} = 1.34 \times 10^6 \text{ eq/c}$

$$I = \frac{8.2}{1} \text{ Amp}$$



graphically solved

Q4) a) 1st order $V = \frac{Q}{K} \ln c_0/c_e - 2m$

2nd order $V = \frac{1}{K} \left[\frac{1}{c_e} - \frac{1}{c_0} \right] - 2m$

b) Adsorption — (1)

Factor — 2 m

Langmuir — 1m

Freundlich — 1m

Ans
 RAJAN