

Q-1

a) $0.02339 \text{ bar} = P_v$

b) $W = 14.7 \text{ g/kg d.a}$

c) $\phi = 55\%$

d) $h = 67.73$

e) $v = 0.878 \text{ m}^3/\text{kg d.a}$

Q-3:

$P_v = 0.031 \text{ bar}$

$W = 0.0198 \text{ kg/kg d.a}$

$\phi = 35.6\%$

$DPT = 24.63^\circ\text{C}$, $h = 74 \text{ kJ/kg d.a}$

$\frac{W}{W_{\text{Sat}}} = \mu = \left(\frac{P_v}{P - P_v} \right) \left(\frac{P_s - P_s}{P_s} \right) = 33.6\%$

Q-5:

$SHF = 0.46$

NOTES

$m_s = 0.0075 \text{ kg/kg d.a}$

Q-6:

$DBT = 31.5^\circ\text{C}$, $RH = 78\%$

Q-7 :

$$DBT = 10^{\circ}\text{C}, R.H = 100\%$$

$$m_{\text{condensate}} = 0.297 \text{ kg/kg d.a}$$

Q-8 :

$$DBT = 22.67^{\circ}\text{C}$$

$$m_s = 8.6 \text{ g/kg d.a}$$

Q-9 :

$$t_2 = 10^{\circ}\text{C}$$

$$m_s = 0.0085 \text{ kg/kg d.a}$$

$$Q = 41.73 \text{ kJ/kg d.a}$$

Q-10 :

$$d) SHF = 0.348$$

$$c) SH = 5066 \text{ kJ/min}$$

$$LH = 9465 \text{ kJ/min}$$

NOTES

$$a) 333.3 \text{ kg/min.}$$