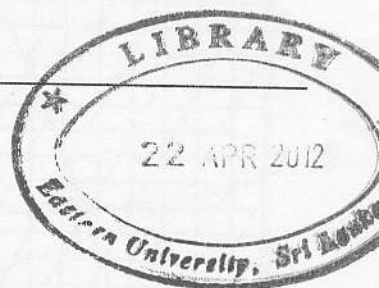


EASTERN UNIVERSITY SRILANKA
SECOND YEAR SECOND SEMESTER EXAMINATION IN AGRICULTURE -2009/2010
(Jan/Feb/March 2012)

AEN 2202 - POST HARVEST TECHNOLOGY (2:30/00)

Time allowed: 2 hours

Answer all questions



01. (a) Briefly describe the different grading systems of paddy.
(b) Explain the drying mechanism of paddy
(c) List out the factors considered in quality control of paddy.
02. (a) Discuss the methods of parboiling.
(b) Explain the advantages and disadvantages of parboiling
(c) Briefly discuss about marketing of paddy in Sri Lanka
03. (a) Explain the factors affecting storage life of fresh produce
(b) Briefly discuss the post harvest losses in fruits and vegetable
04. (a) Illustrate and describe the theory of grain mass drying process
(b) Comment on psychrometric chart and its use.
(c) An experiment was conducted to compare the drying performance of a dryer. The atmospheric air at 30°C (db) was heated to 35°C to dry 1 metric ton of grain with 25% moisture content(wet basis) and the moisture content of the paddy reduced to 14% (dry basis). The RH of atmospheric air was 40% and air flow rate was $45\text{ m}^3/\text{min}$. The drying was continued until the exit air reached 90% RH. Latent heat of vaporization (LH)= 677kcal/kg .
Find;
(i) Amount of moisture removed per kg of dry air
(ii) How much heat required for drying process?
(iii) Duration of drying.
(Psychrometric chart is provided)



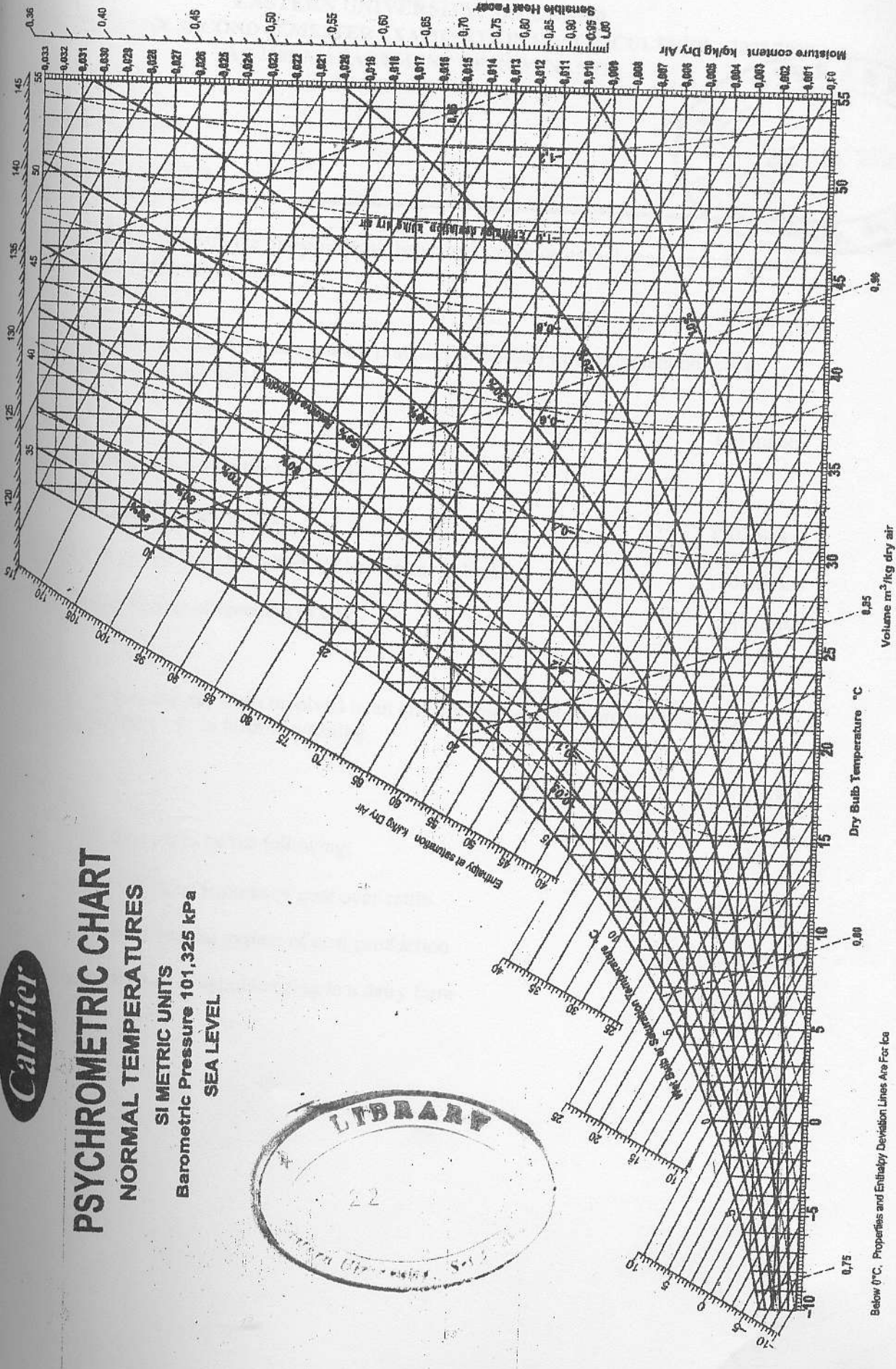
PSYCHROMETRIC CHART

NORMAL TEMPERATURES

SI METRIC UNITS

Barometric Pressure 101,325 kPa

SEA LEVEL



Below 0°C, Properties and Enthalpy Deviation Lines Are For Ice