THERMAL PROPERTIES OF FLUIDS

***General Instructions*:** Answer all the questions. If you are unable to answer any question, go through the page number that is given against that particular question in the text book. You can find the answer.

Test Paper-I

MAX MARKS: 30 **TIME: 90Mts**

1	Define temperature.	P275	1
2	Why do a glass of ice-cold water left on a hot summer day eventually warms up whereas a cup of tea on the same table cools down?	P274	1
3	What are the difference between heat and temperature	P274	2
4	Plot a graph showing the variation of Fahrenheit temperature with Celsius temperature.		
5	What is the commonly used property that is made use of in measuring the temperature using thermometers?	P275	1
6	Give the formula which is used to convert Fahrenheit scale of temperature to Celsius scale of temperature and vice versa.	P275	1
7	Give the difference between a Liquid in glass thermometers and a thermometer that uses a gas in glass thermometers. What is an Ideal-gas equation? Give the two laws from which the ideal gas equation is derived.	P276	2
8	Give the principle on which the working of a constant volume gas thermometer depends upon. How is temperature read from a constant volume thermometer? Also plot the variation of pressure with temperature for low density gases.	P276	3
9	Give the formula to convert Celsius scale of temperature to Kelvin scale of temperature. What is the importance of absolute zero temperature?	P276	2
10	A balloon partially inflated in a cool room grows to full size when placed in warm water. Give reason.	P277	1
11	What is meant by thermal expansion? Mention different types of thermal expansion.	P277	2
12	Define coefficient of linear expansion of solids. Derive an expression to find the coefficient of linear expansion of solids. Also give the factors on which the coefficient of linear expansion depends upon.	P277	3

13	Plot the graph showing the variation of Co-efficient of volume expansion of copper as a function of temperature. What important conclusion that you can draw form this graph?	P277	2
14	What is meant by anomalous expansion of water? Explain how does this property of water supports the animal and plant life in lakes and ponds?	P278	3
15	Discuss the effect of temperature on the coefficient of volume expansion of gases and liquids.	P278	3
16	Derive the relation between coefficient of linear expansion and coefficient of volume expansion	P278	3