

UNIT V

Measurement of Power, Flow and Temperature related properties

2 MARKS

110. What are load cells?

Load cells are devices for the measurement of force through indirect methods.

111. Give the principle of hot wire anemometer

When a fluid flows over a heated surface heat is transferred from the surface and so the temperature reduces. The rate of reduction of temperature is related to flow rate.

112. State any four inferential types of flow meter

- (i) Venturi meter,
- (ii) orificemeter,
- (iii) rotameter,
- (iv) pitot tube.

113 What is the principle involved in fluid expansion thermometer?

Change in pressure in the bulb is taken as an indication of the temperature.

114. Mention the principle involved in bimetallic strip.

Is based on change in dimension

115. What is thermocouple?

When two metals are joined together it will create an emf and it is primarily a function of the junction temperature.

116. What is a kentometer?

It is a device for measurement of absolute pressure.

117. What is thermopile?

When thermocouples are connected in series it is called thermopile.

16 MARKS

- 1) How to measure the power by using rope brake dynamometer? Explain with a neat diagram
- 2) Explain how cup and vane type anemometers are used to measure air movement.
- 3) With neat sketch explain the construction and working principle of vapor pressure thermometer.

- 4) List the advantages of temperature measurement by using the resistance thermometer.
- 5) Explain with neat diagram the purpose and operating principle of a venturimeter.
- 6) What are rotometers? State its applications.
- 7) Explain the working principle of an electrical resistance thermometer.
- 8) What are thermo couples? State its applications.