



M.Tech II Semester Supplementary Examinations January/February 2019

INSTRUMENTATION FOR THERMAL ENGINEERING

(Thermal Engineering)

(For students admitted in 2017 only)

Time: 3 hours

Max. Marks: 60

Answer all the questions

- 1 Sketch and explain briefly the characteristics of instrumentation with example.

OR

- 2 Explain briefly with an example of systematic and random errors. How can be reduced these errors?

- 3 (a) What are the difference between data loggers and data acquisition?

- (b) What are the different types of data loggers and how do they operate?

OR

- 4 Write a note on:

- (a) Use of sensors for error reduction.

- (b) Interfacing.

- 5 Explain briefly the measurement of physical quantities with content discussion and activities.

OR

- 6 Explain briefly the different types of temperature sensors with sketches.

- 7 With a neat sketch, explain briefly the shadowgraph technique.

OR

- 8 Define hot wire anemometer. Explain with neat sketches constant current meshed and constant temperature meshed anemometers.

- 9 Explain briefly automotive exhaust gas analyzer and vehicle exhaust gas analyzer.

OR

- 10 (a) What is spectrometry and what it is used for?

- (b) With a neat sketch, explain simple mass spectrometer.
