

Code :R7311005

R7

III B.Tech I Semester(R07) Supplementary Examinations, May 2011
INDUSTRIAL INSTRUMENTATION
(Electronics & Instrumentation Engineering)

Time: 3 hours

Max Marks: 80

Answer any FIVE questions
All questions carry equal marks

1. (a) Write a short notes on:
 - i. Measurement of length
 - ii. Measurement of Area(b) Explain the optical method of length measurement.
2. (a) With a neat diagram explain the operation of Revolution counter for measurement of velocity.
(b) Explain the operation of potentiometer type accelerometer.
3. (a) Explain the measurement of force by using strain Guage load cell.
(b) Explain the measurement of torque using load cell.
4. (a) Write a short notes on:
 - i. Knudsen guage
 - ii. Ionization guage.(b) Explain about well type manometer pressure guage.
5. (a) Explain with the help of a diagram the principle of working of a Rota meter. (Area type).
(b) Explain the Excitation schemes of an electromagnetic flow meter.
6. (a) Explain about strain guage load cell method for density measurement.
(b) Write a short notes on Gamma-ray method for measurement of density.
7. (a) What is nuclear instrumentation. Explain the types of radiation.
(b) Explain the working principle of Radiation thermometer.
8. (a) Explain the operation of sound-level meter.
(b) Write a short notes on:
 - i. Humidity
 - ii. Absolute humidity
 - iii. Relative humidity.
