



SF-8348

B. E. - III (Sem. VI) (Inst. & Ctrl.) Examination
May / June - 2011
Instrumentation Measurement - II

Time : 3 Hours]

[Total Marks : 100

Instructions :

(1)

नीचे दृष्टावेक निशानीवाणी विगतो उत्तरवही पर अवश्य कभवी. Fillup strictly the details of signs on your answer book.	Seat No. :
Name of the Examination :	<input type="text"/>
<input type="text" value="B. E. - 3 (SEM. 6) (INST. & CTRL.)"/>	<input type="text"/>
Name of the Subject :	<input type="text"/>
<input type="text" value="INSTRUMENTATION MEASUREMENT - 2"/>	<input type="text"/>
Subject Code No. : <input type="text" value="8"/> <input type="text" value="3"/> <input type="text" value="4"/> <input type="text" value="8"/>	<input type="text" value="Student's Signature"/>
Section No. (1, 2,.....) : <input type="text" value="NIL"/>	

- (2) Figure to the right indicate maximum marks.
(3) Draw neat figure wherever required.

- 1 (a) Answer the short questions :
- | | |
|---|---|
| (i) Define Viscosity. Classify the viscometers. | 2 |
| (ii) Define strain. Classify the strain gauges. | 2 |
| (iii) Define density. | 1 |
| (iv) Define vibration and shock. | 2 |
| (v) Define Length. | 1 |
| (vi) Give difference between bonded and unbounded strain gauge. | 2 |

- (b) Define Force and list out different methods of Force measurement. Explain LVDT based force measurement. 8

- 2 (a) Explain Capillary type viscometer in detail with their advantages and disadvantages. 8
- (b) Explain different wires Gauges. Prove the Eq. $G.F. = 1+2V$ for resistance strain gauge. 8

OR

- (b) Explain Measurement of density using a hydrostatic head. 8

- 3 (a) Explain DP Transmitter with a Pressure Repeater. 8
 (b) Explain Servo Accelerometer for vibration measurement. 8

OR

- 3 (a) Explain electronic Length Measurement.
 (b) Explain Gauge characteristics. 8

- 4 (a) Answer the short questions.
 (i) Define spectrophotometer. 1
 (ii) Define coalescers. 2
 (iii) Define polarography. 2
 (iv) Explain absorption in UV and visible spectra. 2
 (v) Explain sample disposal techniques. 3
 (b) Explain online infrared absorption meter. 8

- 5 (a) Explain dispersive infrared analyzer. 8
 (b) Explain direct current polarography. 8

OR

- (b) Explain typical sampling systems. 8

- 6 (a) Explain HPLC system. 8
 (b) Explain ion selective electrodes 8

OR

- 6 (a) Explain x ray fluorescence spectroscopy. 8
 (b) Explain sample conditioning systems. 8
