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## GUJARAT TECHNOLOGICAL UNIVERSITY BE - SEMESTER- V • EXAMINATION – WINTER 2016

Date: 24/11/2016

Subject Code: 151701

**Subject Name: INDUSTRIAL MEASUREMENT** Time: 10:30AM – 01:00PM Total Marks: 70 **Instructions:** 1. Attempt all questions. 2. Make suitable assumptions wherever necessary. 3. Figures to the right indicate full marks. 07 **Q.1** (a) Narrate constant current type hot wire anemometer with neat sketch, principle and working. (b) Narrate Vortex shedding flow meter with neat sketch, principle and working. 07 **Q.2** Narrate turbine mass flow meter with neat sketch, principle and working. 07 **(b)** Narrate flow nozzle with neat sketch, principle and working. 07 OR **(b)** Narrate rotameter with neat sketch, principle and working. 07 0.3 (a) Narrate resistance type level measurement with neat sketch, principle and 07 working. (b) Narrate ultrasonic level measurement with neat sketch, construction, principle **07** and working. OR Q.3 (a) Explain the use of DP transmitter for level measurement with neat sketch. **07** (b) Narrate bubbler system level measurement with neat sketch, construction, 07 principle and working. 0.4 Explain working of Pirani gauge vacuum measurement with neat sketch. 07 Narrate piezoelectric pressure measurement with neat sketch, construction, 07 principle and working. OR Narrate dead weight piston gauge for pressure measurement with neat sketch, 0.4 **07** construction, principle and working. (b) Narrate hydrostatic pressure method in closed tank for level measurement with 07 neat sketch, construction, principle and working. Q.5 Narrate thermister temperature measurement with neat sketch, construction, 07 principle, operation and working limitations. (b) Narrate thermopile temperature measurement with neat sketch, construction, 07 principle and working. OR Narrate RTD temperature measurement with constant current source with neat Q.5 (a) 07 sketch, principle and working. **(b)** Give different temperature scales and compare them. **07** 

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