

GUJARAT TECHNOLOGICAL UNIVERSITY
B. E. - SEMESTER – VII • EXAMINATION – WINTER 2012

Subject code: 171703**Date: 01/01/2013****Subject Name: Industrial Data Communication****Time: 10.30 am - 01.00 pm****Total Marks: 70****Instructions:**

1. Attempt any five questions.
2. Make suitable assumptions wherever necessary.
3. Figures to the right indicate full marks.

- Q.1** (a) Discuss OSI model in detail. **07**
(b) Explain electrical coupling of noise. **07**
- Q.2** (a) Discuss connections between DTE and DCE using DB 25. **07**
(b) Draw and discuss typical two wire multi drop network under EIA 485. **07**
- OR**
- (b) Explain IPv4 header. **07**
- Q.3** (a) Discuss EIA 232 / EIA 485 converter in detail. **07**
(b) Explain fiber optic cable components. **07**
- OR**
- Q.3** (a) Explain fundamental elements of a radio link. **07**
(b) Discuss null modem connection. **07**
- Q.4** (a) Explain read coil or digital output status (function code 01) in modbus with example. **07**
(b) Explain read digital input status (function code 02) in modbus with example. **07**
- OR**
- Q.4** (a) Explain DeviceNet topology. **07**
Q.4 (b) Explain hybrid medium access control in ProfiBus. **07**
- Q.5** (a) Discuss physical layer of HART protocol. **07**
(b) Draw and discuss different AS-i configurations. **07**
- OR**
- Q.5** (a) Explain the OSI model for Foundation Fieldbus protocol stack. **07**
(b) Discuss 10Base5 Ethernet segment. **07**
