

Seat No.: _____

Enrolment No. _____

GUJARAT TECHNOLOGICAL UNIVERSITY
BE - SEMESTER-VII • EXAMINATION – SUMMER • 2014

Subject Code: 172405

Date: 31-05-2014

Subject Name: Industrial Communication Systems

Time: 02:30 pm - 05:00 pm

Total Marks: 70

Instructions:

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

- Q.1** (a) With neat sketch Explain the block diagram of communication system. **05**
(b) Define Modulation. What are the advantages of Modulation? **05**
(c) Derive the equation of Modulation Index. **04**
- Q.2** (a) Define noise. Explain noise in details. **07**
(b) With the necessary mathematical analysis show the power relation of the A.M. Wave. **07**
- OR**
- (b) Compare AM,FM & PM in tabular forms. **07**
- Q.3** (a) Explain Synchronous and asynchronous transmission. **07**
(b) Explain RS 232 Interface Standards. **07**
- OR**
- Q.3** (a) Write detailed notes on UART. **07**
(b) Differentiate balanced and unbalanced transmission lines? Explain it With suitable example. **07**
- Q.4** (a) Compare ASK, FSK, PSK and PWM. **06**
(b) Write a detailed note on Suppression techniques. **08**
- OR**
- Q.4** (a) Explain source of electrical noise. **06**
(b) Draw the block diagram of Fiber Optics Communication (FOC) system and explain it. Also list down the benefits of FOC. **08**
- Q.5** (a) Explain in detail HART protocol. **07**
(b) Explain CSMA/CA with necessary figures. **07**
- OR**
- Q.5** (a) Define Protocol. Explain TCP/IP. **07**
(b) Write a note on:- **07**
(1) CDPD
(2) Network Topologies
