Roll No. ....

24429

B. Tech. 7th Semester (EEE)
Examination – December, 2016
INTELLIGENT INSTRUMENTATION FOR ENGINEERS
Paper : IC-455-F

Time : Three Hours]   [Maximum Marks : 100

Before answering the questions, candidates should ensure that they have been supplied the correct and complete question paper. No complaint in this regard, will be entertained after examination.

Note : Attempt total *five* questions, selecting at least *one* question from each Section. Question No. **1** is *compulsory*. All questions carry equal marks.

1. (a) What do you mean by intelligent instrumentation ?

   (b) Define filter. Also explain its types.

   (c) Discuss use of ring and bus networks.

   (d) What is the necessity of the signal filtering ?

   (e) Explain Local Area Network (LAN).

SECTION – A

2. Define an intelligent instrumentation system. How the intelligent instrumentation is different from conventional instrumentation ?

3. What are the various components of intelligent instrumentation system ? Discuss with the help of the block diagram.

SECTION – B

4. What is the importance of D/A converter as an interfacing device ? Discuss any *one* technique for digital to analog conversion of the data.

5. (a) Discuss different interfacing considerations.

   (b) Explain data transfer control in detail.

SECTION – C

6. (a) Explain fibre optic distributed network.

   (b) Describe EEE 488 bus standard.

7. Explain different local area networks in detail.

SECTION – D

8. What is the necessity of the signal filtering ? Discuss spike filter in detail.

9. Write technical note on :

   (a) Low Pass Filter

   (b) Const K filter