Q.30 What are the Various application of VI in Process control System.

Q.31 Write the various advantages of virtual instruments over traditional instruments.

Q.32 Write the name of Instrumentation Buses.

Q.33 What are ADC.

Q.34 Differentiate b/w ADC and DAC.

Q.35 Give the various examples of signal processing.

## SECTION-D

**Note:** Long answer type questions. Attempt any two questions out of three questions. (2x10=20)

Q.36 Write short note on following:
a) Virtual Instruments
b) Conventional Instruments

Q.37 Explain data acquisition in detail.

Q.38 Write a note on any two:
a) ADC
b) DAC
c) DIO

**6th Sem / Branch : Instrumentation & Control**
**Sub. : Virtual Instrumentation**

Time : 3Hrs.                          M.M. : 100

## SECTION-A

**Note:** Multiple choice questions. All questions are compulsory (10x1=10)

Q.1 The USB Device follows_____structure.
a) Tree            b) List
c) Tluffman        d) Hash

Q.2 Which of these best describe an array?
a) A data structure that shows a hierarchical behaviour
b) Container of objects of similar types
c) Arrays are immutable once intialised
d) Array is not a data structure

Q.3 Which of the following is not a serial protocol?
a) RS-232          b) Serial Port
c) Parallel Port   d) SPI

Q.4 Expand DAQ?
a) Data acquisition software
b) Data acquiring system
c) Data Allied System
d) Data Acquisition System

Q.5    Data acquisition systems are used when_____.
 a)    Bandwidth is Low
 b)    Bandwidth is Zero
 c)    Bandwidth is High
 d)    Bandwidth is Medium

Q.6    What does lab VIEW stand for?
 a)    Laboratory Virtual Instrumentation
 b)    Laboratory View Point
 c)    Learning Based View Point
 d)    Engineering work branch learning

Q.7    GPIB stands for:
 a)    General Purpose institute Bus
 b)    General Purpose Interface Bus
 c)    General Parallel Interface Bus
 d)    General Parallel Institute Bus

Q.8    AID converter is used to _____.
 a)    Convert Digital to Analog Signal
 b)    Convert Analog to Digital Signal
 c)    Convert Digital to Analog Mixed Signal
 d)    Convert Analog to Digital Mixed Signal

Q.9    In USB the devices can communicate with each other
 a)    True                    b)    False

Q.10   Which of the following can be used for long distance Communication
 a)    $l_2C$                    b)    RS-232
 c)    SPI                     d)    Parallel Port

## SECTION-B

**Note:** Objective type questions. All questions are compulsory.                    (10x1=10)

Q.11   Define Array.

Q.12   What is Editing.

Q.13   Expand ADC.

Q.14   What is Virtual Instrumentation.

Q.15   What is Debugging?

Q.16   Define RS-232 interface.

Q.17   Define Structure.

Q.18   What are the timers?

Q.19   Define Grap.

Q.20   What are Chart?

## SECTION-C

**Note:** Short answer type questions. Attempt any twelve questions out of fifteen questions.          (12x5=60)

Q.21   List the Various Application of lab-view.

Q.22   Explain Debugging.

Q.23   How cluster are created in lab view.

Q.24   Describe the role of connectors and timers.

Q.25   What is PC hardware structure.

Q.26   Differentiate between array and structure.

Q.27   What is USB.

Q.28   List at least five application of Virtual Instrumentation.

Q.29   Write a short note GPIB.