Q.24 Explain earthling.

Q.25 Discuss OP-AMP as subtractor.

Q.26 Describe various testing signals.

Q.27 Discuss selection criteria of instruments.

Q.28 Explain LCD with suitable diagram.

Q.29 Classify various error.

Q.30 Explain block diagram of an OP-AMP.

Q.31 Write a short note on GPIB.

Q.32 Define input offset current & slew rate.

Q.33 Discuss basics of printing devices.

Q.34 Describe process of calibration.

Q.35 Explain static characteristics.

SECTION-D

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

Q.36 Explain Instrumentation system with its block diagram.

Q.37 Discuss data logger with its block diagram.

Q.38 Discuss OP-AMP as an Integrator & Differentiator.

Roll No. .....

4th Sem / Branch : Instrumentation & Control Engg.
Subject:- Basic of Instrumentation

Time : 3Hrs. M.M. : 100

SECTION-A

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

Q.1 Unit of Temperature is_____

a) Kelvin b) Watt

c) Weber d) Henery

Q.2 The second stage of measurement system is known as_____

a) Intermediate stage

b) Terminating stage

c) Detector Transducer Stage

d) None of these

Q.3 GPIB operates in which mode.

a) Parallel b) Series

c) Both (a) & (b) d) None of these

Q.4 IC 741 OP-AMP is a_____pin device.

a) 6 b) 7

c) 8 d) 2

Q.5 The turn of time of LCD is of the order of

a) 10 ms b) 1 sec

c) 1 ms d) 10 ns

Q.6 Observational errors are example of_____

a) Gross error b) Random error

c) Systematic error d) None of these

Q.7 Which one is the static characteristics.

a) Fidelity b) Accuracy

c) Measuring Lag d) None of these

Q.8 OP-AMP output appear at pin_____.

a) 2 b) 3

c) 6 d) 5

Q.9 The main advantage of LEDs_____.

a) Miniature size b) High efficiency

c) LEDs are rugged d) All of these

Q.10 X-T record is an example of_____.

a) Graphic Recorder

b) Oscillography recorders

c) Magnetic tape recorders

d) None of these

SECTION-B

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

Q.11 Ramp input is a test signal. True/False.

Q.12 Expand LED.

Q.13 Tangent Galvanometer is an example of secondary instruments. True/False

Q.14 Define span.

Q.15 Fourteen segment display uses_____LEDs.

Q.16 For an ideal OP-AMP output Impendence is zero. True/False

Q.17 Define accuracy.

Q.18 LCD is made up by semiconductors. True/False

Q.19 Expand CMRR.

Q.20 Define dynamic characteristic.

SECTION-C

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

Q.21 Write a short note on significance of measurement and its types.

Q.22 Discuss resolution & dead time.

Q.23 Discuss working principle of X-Y recorders.