Q.27 Discuss significance of measurement.

Q.28 What are merits and demerits of circular chart recorder?

Q.29 Explain the importance of calibration.

Q.30 Write short note on building blocks of instrument.

Q.31 Write short note on field buses.

Q.32 Explain various sources of error.

Q.33 Write a short note on Earthing.

Q.34 Explain following terms briefly

a) Hysteresis b) Resolution

Q.35 Explain data loggers.

SECTION-D

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

Q.36 Write short note on any two

a) LED

b) Printing Device

c) Merit and demerits of strip chart recorder

Q.37 Explain dynamic characteristic of instrument in detail.

Q.38 Explain the OPAMP as Instrumentation amplifier and Differentiator.

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3rd Sem / IC , EI
Subject:- Basics of Instrumentation / Pr. Of Inst.

Time : 3Hrs. M.M. : 100

SECTION-A

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

Q.1 Which of following is static characteristic

a) Frequency b) Accuracy

c) Time constant d) Damping ratio

Q.2 Unit of energy

a) Tesla b) Watt

c) Joule d) Weber

Q.3 What is the disadvantage of LCD

a) Low cost b) Lower power

c) Slow device d) none of above

Q.4 RS-232 bus has____ number of pin

a) 25 b) 26

c) 24 d) 21

Q.5 Misuse of instrument is known as

a) Gross error b) Instrumental error

c) Random error d) none of above

Q.6 The bandwidth of ideal OPAMP should be

a) 0 b) ¥

c) 10 d) 100

Q.7 Errors are categorized in

a) 2 b) 5

c) 7 d) 3

Q.8 Which of the following is test signal

a) Impulse b) Signum

c) Exponential d) none of above

Q.9 Desirable property in measurement system

a) Dead zone b) Sensitivity

c) Drift d) Nonlinearity

Q.10 The gain of ideal OPAMP

a) 0 b) 10

c) ¥ d) 100

SECTION-B

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

Q.11 Define Slew rate.

Q.12 Explain resolution.

Q.13 Define earthing.

Q.14 The unit of temperature is hertz(T/F)

Q.15 Define scanning.

Q.16 Expand PSRR.

Q.17 Name any two types of measurement.

Q.18 LCD is made up by semiconductor(T/F)

Q.19 Define sensitivity.

Q.20 Expand GPIB.

SECTION-C

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

Q.21 Explain data loggers.

Q.22 Write short note on CMRR.

Q.23 Explain OPAMP as adder.

Q.24 Describe classification of error.

Q.25 What is selection criteria of instrument?

Q.26 Draw and explain ramp test signal.