

Program: BE (Electronics) Engineering

Curriculum Scheme: Revised 2016

Examination: Third Year Semester VII

Course Code: **ELX701** and Course Name: **Instrumentation System Design**

Time: 1hour

Max. Marks: 50

Note to the students:- All the Questions are compulsory and carry equal marks .

Q1.	An OR function implemented in ladder logic uses:
Option A:	Normally-closed contacts in series
Option B:	Normally-open contacts in series
Option C:	A single normally-closed contact
Option D:	Normally-open contacts in parallel
Q2.	Which of the following is not the component of a SCADA system?
Option A:	Database server
Option B:	I/O system
Option C:	PLC controller
Option D:	Sparger controller
Q3.	PC based data acquisition system displays system parameters _____
Option A:	once in a while
Option B:	intermittently
Option C:	continuously
Option D:	only at specific intervals
Q4.	The reciprocal of proportional band is called:
Option A:	Reset
Option B:	Percent
Option C:	Minutes per repeat
Option D:	Gain
Q5.	To stop the program if the DAQ Assistant encounters an error, use the _____ function to extract the error status and wire this to the conditional terminal of the While Loop.
Option A:	Build Array
Option B:	Unbundle by name
Option C:	Bundle by name
Option D:	Disassemble cluster
Q6.	An example of discrete (digital) control is:
Option A:	Varying the volume of a music system

Option B:	Turning a lamp ON or OFF
Option C:	Varying the brightness of a lamp
Option D:	Controlling the speed of a fan
Q7.	In a Multichannel Analog Multiplexed System _____
Option A:	A/D converter is used
Option B:	D/A converter is used
Option C:	Sigma delta converter is used
Option D:	Modulator is used
Q8.	The difference between online and offline PLC programming is . . .
Option A:	whether the PLC is running or stopped
Option B:	whether the programming PC has internet connectivity
Option C:	the type of programming cable used
Option D:	where the edited program resides
Q9.	In a measuring system quantity under measurement is termed as _____
Option A:	Measurand
Option B:	Controllers
Option C:	Sensors
Option D:	Indicators
Q10.	Which technique is most widely used in the single channel data acquisition system?
Option A:	Counter type approximation
Option B:	Flash approximation
Option C:	Successive approximation
Option D:	Delta Sigma approximation
Q11.	The capability of convention relay systems for complex operations is ____ that of the PLCs
Option A:	poor than
Option B:	excellent than
Option C:	as good as
Option D:	unpredictable as
Q12.	_____ is used to prevent oscillation in moving system.
Option A:	Oscillatory system
Option B:	Controlling
Option C:	Damping system
Option D:	Deflecting
Q13.	Digital acquisition systems are used when _____
Option A:	bandwidth is high
Option B:	bandwidth is medium
Option C:	bandwidth is zero

Option D:	bandwidth is low
Q14.	What led to the development of PC based transducers?
Option A:	low cost
Option B:	medium cost
Option C:	high cost
Option D:	zero cost
Q15.	The output device on a ladder diagram is represented by
Option A:	square
Option B:	circle
Option C:	rectangle
Option D:	semicircle
Q16.	PLC can be _____ in plant to change the sequence of operation.
Option A:	only programmed
Option B:	only reprogrammed
Option C:	programmed and reprogrammed
Option D:	able to give a set point
Q17.	In differential-mode,
Option A:	opposite polarity signals are applied to the inputs
Option B:	the gain is one
Option C:	the outputs are of different amplitudes
Option D:	only one supply voltage is used
Q18.	Which of the following can be used for long distance communication?
Option A:	I2C
Option B:	Parallel port
Option C:	SPI
Option D:	RS232
Q19.	In a measuring system quantity under measurement is termed as _____
Option A:	Measurand
Option B:	Controllers
Option C:	Sensors
Option D:	Indicators
Q20.	Which of the following represents the correct relation between pressure and displacement in flapper nozzle system?
Option A:	Direct proportionality
Option B:	Inverse proportionality

Option C:	Equal
Option D:	Not related
Q21.	What is SCADA?
Option A:	Software
Option B:	Process
Option C:	System
Option D:	Hardware
Q22.	Process variable filtering should be used:
Option A:	to dampen noise
Option B:	only on integrating processes
Option C:	to improve response time
Option D:	only on self-regulating processes
Q23.	Multiplexing after A/D conversion involves _____
Option A:	noisy data
Option B:	mixed signal data
Option C:	analog data
Option D:	digital data
Q24.	Science of precise and accurate measurement of various physical quantities is termed as
Option A:	Metrology
Option B:	Meteorology
Option C:	Pedology
Option D:	Mineralogy
Q25.	Which of the following is the heart of a SCADA system?
Option A:	PLC
Option B:	HMI
Option C:	Alarm task
Option D:	I/O task