

Program: BE Mechanical Engineering

Curriculum Scheme: Revised 2016

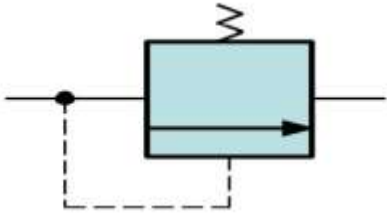
Examination: Third Year Semester VI

Course Code: MEDLO6023 and Course Name: Industrial Automation

SAMPLE PAPER

Q1.	In which case Flexible automation system is used?
Option A:	Low production rates
Option B:	High production rates
Option C:	Continuous production of variable mixtures of products
Option D:	Low Initial Investment.
	Ans: C
Q2.	Which is not an element of automated system?
Option A:	Process
Option B:	Program of Instructions
Option C:	Control system
Option D:	Control parameters
	Ans: D
Q3.	Which advanced automation function is used to protect human workers in the vicinity of the system?
Option A:	Maintenance & repair diagnostics
Option B:	Safety monitoring
Option C:	Error detection & recovery
Option D:	Process parameters
	Ans: B
Q4.	In which phase of Automation migration strategy, production using single station automated cells is done.
Option A:	Phase 1
Option B:	Phase 2
Option C:	Phase 3
Option D:	Phase 4
	Ans: B
Q5.	Which level is highest in levels of automation?
Option A:	Device level
Option B:	Cell or system level
Option C:	Plant Level
Option D:	Enterprise level
	Ans: D

Q6.	Which one is a feature of Mechanization?
Option A:	Computers and sophisticated machines
Option B:	Creating jobs for skilled workers
Option C:	Creating jobs for unskilled workers
Option D:	Affecting many industries at a time
	Ans: C
Q7.	In which case open loop system is not appropriate to use.
Option A:	The actions performed by control system are simple
Option B:	The actuating function is very reliable
Option C:	The actions performed by control system are complicated
Option D:	Reaction forces opposing the actuation are small enough to have any effect on the actuation
	Ans: C
Q8.	What is the notation used for the sequence of operations mentioned below? 1. Cylinder A undergoes backward stroke 2. Cylinder B undergoes backward stroke 3. Cylinder A undergoes forward stroke 4. Cylinder B undergoes forward stroke
Option A:	A <sup>-</sup> B <sup>-</sup> A <sup>+</sup> B <sup>+</sup>
Option B:	A <sup>+</sup> B <sup>-</sup> A <sup>+</sup> B <sup>-</sup>
Option C:	A <sup>+</sup> B <sup>+</sup> A <sup>-</sup> B <sup>-</sup>
Option D:	A <sup>+</sup> B <sup>-</sup> A <sup>-</sup> B <sup>+</sup>
	Ans: A
Q9.	4/3 way single solenoid valve has
Option A:	4 ports 3 positions.
Option B:	3 ports 4 positions.
Option C:	4 ports 4 positions
Option D:	3 ports 3 positions.
	Ans: A
Q10.	Which statement is not true in case of pneumatic system?
Option A:	It is an open system
Option B:	Leakage does affect the system
Option C:	Valve operations are easy
Option D:	Lighter in weight
	Ans: B
Q11.	The most common hydraulic fluid is
Option A:	Mineral oil
Option B:	Synthetic fluid
Option C:	Water
Option D:	Gel

	Ans: C
Q12.	Which type of valve is shown below 
Option A:	Directional Control Valve
Option B:	Flow Control Valve
Option C:	Pressure Control Valve
Option D:	Check valve
	Ans: C
Q13.	The armature torque of the DC shunt motor is proportional to
Option A:	Armature current only
Option B:	Field flux only
Option C:	Field current
Option D:	Field flux and armature current
	Ans: A
Q14.	_____ is a measure of the change in output of the sensor relative to a unit change in the input
Option A:	Resolution
Option B:	Sensitivity
Option C:	Linearity
Option D:	Drift
	Ans: B
Q15.	Which law determines the direction of rotation of motor?
Option A:	Coulomb's law
Option B:	Faraday's law
Option C:	Fleming's left-hand rule
Option D:	Lenz's law
	Ans: C
Q16.	What is the definition of a Relay?
Option A:	Electro-magnetically activated switch
Option B:	A type of solenoid valves
Option C:	A device used for pneumatic lubrication
Option D:	A type of electric sensor
	Ans: C

Q17.	Which valve allows flow of fluid in only one direction and prevents the flow in the opposite direction?
Option A:	Direction Control Valves
Option B:	Check valves
Option C:	Flow control valves
Option D:	Pressure control valves
	Ans: B
Q18.	An example of discrete control is
Option A:	Varying the sound of a music system
Option B:	Turning the lamp ON or OFF
Option C:	Varying the brightness of a lamp
Option D:	Controlling the speed of a fan
	Ans: B
Q19.	The function of a PLC is to
Option A:	Control a high voltage output with a low voltage input
Option B:	Amplify various weak signal sources
Option C:	Control the speed of motors
Option D:	Make logical decisions and control outputs based on them
	Ans: D
Q20.	Which statement is true in case of change of sequence of operations in PLC?
Option A:	It can only be programmed
Option B:	It can only be reprogrammed
Option C:	It can be programmed and reprogrammed
Option D:	Able to give a set point
	Ans: C
Q21.	Ladder logic programming primarily consists of
Option A:	Text based code
Option B:	Function blocks and connecting lines
Option C:	Virtual relay contact and coils
Option D:	Logic gate symbol and connecting lines
	Ans: C
Q22.	Purpose of manipulator is
Option A:	Interact with the environment to move and position objects
Option B:	Manipulate the feedback from robot
Option C:	Move the robot from location to location
Option D:	Provide feedback to the robot.
	Ans: A
Q23.	In which kind of operations SCARA robot is very suitable
Option A:	Assembly operations
Option B:	Single operations

Option C:	Rotary operations
Option D:	Translatory operations
	Ans: A
Q24.	Which type of recovery strategy and procedure must be designed for an error which cannot be classified into the predefined list of errors?
Option A:	Making adjustment at the end of the current cycle
Option B:	Making adjustment during the current cycle
Option C:	Stopping the process to invoke corrective action
Option D:	Stopping the process and calling for help.
	Ans: D
Q25.	Which advanced automation function assist in the identification of actual malfunctions and failures of the system?
Option A:	Maintenance & repair diagnostics
Option B:	Safety monitoring
Option C:	Error detection & recovery
Option D:	Process parameters
	Ans: A