Program: BE Mechanical Engineering

Curriculum Scheme: Revised 2012

Examination: Third Year Semester VI

Course Code: MEC 605 And Course Name: Mechatronics

Time: 1 hour   Max. Marks: 50

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

Q1.	The device which converts one energy into another is called a _____
Option A:	Transistor
Option B:	Transducer
Option C:	PLC
Option D:	Micro-controller
Q2.	The temperature control system which maintains the temperature of a room at 30 ^{o}C when it is set is an example of_____
Option A:	Open loop system
Option B:	Closed loop system
Option C:	Open position
Option D:	Half position system
Q3.	On-off Control is also called as _____.
Option A:	one position control
Option B:	two position control
Option C:	four position control
Option D:	half position control
Q4.	An AC Servo Motor is basically a
Option A:	hysteresis motor
Option B:	synchronous motor
Option C:	DC shunt motor
Option D:	2-phase induction motor
Q5.	The electric motor generally used in computer printer driver is
Option A:	reluctance motor
Option B:	hysteresis motor
Option C:	universal motor
Option D:	stepper motor
Q6.	In DC motor, armature resistance control method is also known as
Option A:	constant torque control.
Option B:	constant power control.
Option C:	constant voltage control.
Option D:	constant current control

Q7.	In a DC motor the direction of rotation is determined by
Option A:	Lenz law.
Option B:	Faraday Law.
Option C:	Fleming left hand rule
Option D:	Fleming right hand rule
Q8.	A pressure relief valve can be
Option A:	spring operated
Option B:	gas operated
Option C:	solenoid operated
Option D:	pedal operated
Q9.	How is reverse flow possible in pilot operated check valve?
Option A:	Spring force lifts the ball due to which reverse flow is possible
Option B:	Fluid pressure lifts the ball due to which reverse flow is possible
Option C:	Automatically without any external aid
Option D:	depends on the fluid
Q10.	The vibration of the piezoelectric device in the drive generates which motion at the tip
Option A:	Circular
Option B:	Linear
Option C:	Oscillatory
Option D:	Elliptical
Q11.	Which of the following is a disadvantage of ball valves? b) c) d).
Option A:	They are large and heavy
Option B:	They have high maintenance costs
Option C:	They have relatively poor throttling characteristics
Option D:	They are among the most expensive of the valve types
Q12.	Housekeeping is
Option A:	detects the state of input devices
Option B:	executes the logic
Option C:	energises the devices
Option D:	communicates with terminals
Q13.	Latching means
Option A:	output energized remains energized
Option B:	input energized remains energized
Option C:	memory energized remains energized
Option D:	CPU energized remains energized
Q14.	After TOGGLE
Option A:	NC becomes NO
Option B:	NC remains NC
Option C:	NC becomes ON

Option D:	NC becomes OFF
Q15.	Output of ADC is
Option A:	Digital
Option B:	Analog
Option C:	Discontinuous
Option D:	Continuous
Q16.	Which of the following is the first flow control method?
Option A:	Software hand shaking
Option B:	hardware handshaking
Option C:	UART
Option D:	SPI
Q17.	Which of the following can provide hardware handshaking?
Option A:	RS232
Option B:	Parallel port
Option C:	Counter
Option D:	Timer
Q18.	Which of the following is not a serial protocol?
Option A:	SPI
Option B:	I2C
Option C:	Serial port
Option D:	RS232
Q19.	Which can prevent the terminal of data transmission?
Option A:	Flow control
Option B:	increasing flow
Option C:	increasing count
Option D:	terminal count
Q20.	Which of the following can be adopted for the systems which does not contain DMA controller for data transmission?
Option A:	Counter
Option B:	Timer
Option C:	Polling
Option D:	Memory
Q21.	Which of the following have low-level buffer filling?
Option A:	Output
Option B:	peripheral
Option C:	DMA controller
Option D:	Input
Q22.	Modern car is operated by
Option A:	Microprocessor

Option B:	Microcontroller
Option C:	Satellite
Option D:	control tower
Q23.	Surveillance balloon is used in
Option A:	traffic control
Option B:	weather monitoring
Option C:	transport of goods
Option D:	personnel deployment
Q24.	Autonomous mobile robot (AMR) does not use
Option A:	Ultrasound
Option B:	Sonar
Option C:	LED
Option D:	IR
Q25.	Automated car parking has
Option A:	Stop barrier
Option B:	Out barrier
Option C:	Go barrier
Option D:	Turn barrier