These are sample MCQs to indicate pattern, may or may not appear in examination

University of Mumbai
Online Examination 2020

Program: BE Mechanical Engineering

Curriculum Scheme: Revised 2016

Examination: Third Year Semester VI

Course Code: MEDLO6021 and Course Name: Mechatronics

Time: 1hour Max. Marks: 50

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

Q1.	The transient response of a system is mainly due to
Option A:	Inertia force
Option B:	Internal forces
Option C:	Stored energy
Option D:	Friction
Q2.	Following is the property of the system which opposes a change in the output variable.
Option A:	Load
Option B:	Power element
Option C:	Resistance
Option D:	Damping
Q3.	Which effect is useful in measuring rapidly varying forces?
Option A:	Piezoelectric
Option B:	Strain gauge
Option C:	Photovoltaic
Option D:	Pneumatic gauging
Q4.	The characteristic that provides an output with respect to the relation with the input is called as
Option A:	calibration of a system
Option B:	response of a system
Option C:	characteristic relation of a system
Option D:	instrumentation of a system
Q5.	Pneumatic and other power systems can support three kinds of motion; they are
Option A:	Linear, reciprocating, and random motion
Option B:	Linear, flowing, and rotary motion
Option C:	Linear, zigzag, and spiral motion
Option D:	Linear, reciprocating, and rotary motion
Q6.	What will happen if the back emf of a DC motor vanishes suddenly?

Option A:	The motor will stop
Option B:	The motor will continue to run
Option C:	The armature may burn
Option D:	The motor will run noisy
Q7.	Which part will surely tell that given motor is DC motor and not an AC type?
Option A:	Winding
Option B:	Shaft
Option C:	Commutator
Option D:	Stator
Q8.	A stepping motor is which type of device
Option A:	Mechanical
Option B:	Electrical
Option C:	Analogue
Option D:	Incremental
Q9.	What is the main function of auxiliary equipment?
Option A:	unit step response
Option B:	ramp response
Option C:	non-linear response
Option D:	linear response
Q10.	What is a digital recorder?
Option A:	records digital data
Option B:	records analog data
Option C:	does not record data
Option D:	records both analog and digital data
Q11.	For lower accuracies _____
Option A:	digital acquisition system is used
Option B:	both digital and analog acquisition systems are used
Option C:	analog acquisition system is used
Option D:	mechanical data acquisition system is used
Q12.	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
Q13.	_____is not a special feature of Pneumatic Actuators
Option A:	Better heat transfer capability.
Option B:	High reliability against failure.
Option C:	Simple in construction
Option D:	No filtration of air
Q14.	In_____the return movement of the piston is effected by a built in spring or by application of an external force.
Option A:	Single acting cylinder

Option B:	Double acting cylinder
Option C:	pneumatic cylinder
Option D:	hydraulic cylinder
Q15.	_____is not a type of air motor
Option A:	Piston type motors
Option B:	Vane motors
Option C:	Turbine motors
Option D:	Hexa motors
Q16.	In ____ type of valve, an output is produced if both the input signals are fed.
Option A:	OR
Option B:	AND
Option C:	NOR
Option D:	NAND
Q17.	_____ is the time required for the response to reach 50% of the final value in the first attempt.
Option A:	Rise time
Option B:	Peak time
Option C:	Settling time
Option D:	Delay time
Q18.	Which of the following is disadvantages of proportional controller?
Option A:	Rapid response
Option B:	Reduces Steady State Error
Option C:	Easy to design and tune
Option D:	Lead to instability
Q19.	In all cases of input frequency, if the gain starts reducing, the phase angle will _____.
Option A:	start reducing
Option B:	start increasing
Option C:	be remaining constant
Option D:	be unpredictable
Q20.	The bode plot is a plot relating log w with magnitude in decibel and.....
Option A:	90 degree
Option B:	180 degree
Option C:	270 degree
Option D:	Phase angle
Q21.	A logical operator that yields a logic 1 output if any input is logic 0 and a logic 0 output if all inputs are logic 1 is called as
Option A:	NAND gate
Option B:	AND Gate
Option C:	OR Gate
Option D:	NOT Gate
Q22.	A logical operator that yields a logic 1 output if all inputs are logic 0 and a logic 0 output if any input is logic 1 is called as

Option A:	NAND gate
Option B:	AND Gate
Option C:	NOR Gate
Option D:	NOT Gate
Q23.	A logical operator that yields a logic 1 output if a logic 0 is entered at the input and a logic 0 output if a logic 1 is entered at the input is called as
Option A:	NAND gate
Option B:	AND Gate
Option C:	NOR Gate
Option D:	NOT Gate
Q24.	How many minimum inputs are needed to execute an OR Gate?
Option A:	1
Option B:	2
Option C:	3
Option D:	4
Q25.	DAC is the abbreviation used for:
Option A:	Direct Analog converter
Option B:	Digital and Analog connections
Option C:	Digital to Analog Converter
Option D:	Digital to Analog Compatibility