

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

University of Mumbai

Examination 2020

Program: BE Mechanical Engineering

Curriculum Scheme: Revised 2016

Examination: Third Year Semester V

Course Code: MEC502 and Course Name: Mechanical Measurement & Control (MMC)

Time: 1hour

Max. Marks: 50

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

Q1.	Parallax error causes due to
Option A:	Fine parallel graduation marks
Option B:	Change in viewing angle
Option C:	Parallel plates
Option D:	Lack of parallel scale

Q2.	Correction is
Option A:	Equal to error value
Option B:	Equal to true value
Option C:	Equal to observed value
Option D:	Less than true value

Q3.	Signal conditioning stage does not include
Option A:	Data conversion element
Option B:	Data manipulation element
Option C:	Data transmission element
Option D:	Sensing element

Q4.	If two devices have same range on scale calibration
Option A:	span will be different
Option B:	Sensitivity will be different
Option C:	Span will be same
Option D:	Resolution will be same

Q5.	Which of the following can be measured using tachometers?
Option A:	Angular speed
Option B:	Linear speed
Option C:	Acceleration
Option D:	Vibration

Q6.	Which of the following is correct for the tachometer system?
Option A:	First order system
Option B:	Second order system
Option C:	Third order system
Option D:	Unpredictable

Q7.	stroboscope is used for the measurement of
Option A:	RPM of flywheel

Option B:	frequency of sound
Option C:	depression of freezing point
Option D:	liquid levels under pressure

Q8.	Self generating transducers are _____ transducers
Option A:	active
Option B:	Passive
Option C:	second
Option D:	inverse

Q9.	Which of the following can be used for measuring temperature?
Option A:	Metallic diaphragm
Option B:	Fluid expansion system
Option C:	Capsule
Option D:	Bourdon tube

Q10.	Which of the following is chosen as a standard thermometric substance?
Option A:	Gas
Option B:	Thermocouple
Option C:	Electric resistance
Option D:	Mercury

Q11.	The thermocouple circuit which is used to measure temperature works on _____.
Option A:	Seebeck effect
Option B:	Peltier effect
Option C:	Thomson effect
Option D:	Hall effect

Q12.	block diagram reduction, the transfer functions of the blocks connected in series _____
Option A:	get divided by each other
Option B:	get multiplied with each other
Option C:	get added with each other
Option D:	get subtracted by each other

Q13.	ms, a point from which the signal is taken for the feedback purpose is indicated by _____
Option A:	summing point
Option B:	reference point
Option C:	actuating point
Option D:	take-off point

Q14.	block diagram reduction, the transfer functions of the blocks connected in parallel _____
Option A:	get multiplied with each other
Option B:	get divided by each other
Option C:	get subtracted by each other
Option D:	get algebraically added with each other

Q15.	_____ is the reference input minus the primary feedback
Option A:	Actuating signal

Option B:	Primary feedback
Option C:	Manipulated variable
Option D:	Error signal

Q16.	An open loop system is distinguished from closed loop system by which of the following?
Option A:	Servomechanism
Option B:	Output pattern
Option C:	Feedback
Option D:	Input pattern

Q17.	required for the response to decrease and stay within specified percentage of its final value
Option A:	Delay Time
Option B:	Rise Time
Option C:	Settling Time
Option D:	Peak Time

Q18.	frequency for a certain second order system if the value of Natural frequency of oscillation is 1
Option A:	5 rad/s
Option B:	8 rad/s
Option C:	3 rad/s
Option D:	2 rad/s

Q19.	frequency of Oscillation for a certain second order system if the value of Peak Time is 2 second
Option A:	1.812 rad/s
Option B:	2.812 rad/s
Option C:	3.812 rad/s
Option D:	0.812 rad/s

Q20.	the value of Position error coefficient is infinity. Determine the steady state error for unit step
Option A:	Equal to Position Error coefficient
Option B:	Infinity
Option C:	One
Option D:	Zero

Q21.	In case of Root Locus, Centroid lies on_____
Option A:	Negative real axis only
Option B:	Positive real axis only
Option C:	Real axis
Option D:	Imaginary axis

Q22.	Angle of Asymptotes depends on
Option A:	P-Z or Z-P
Option B:	only P
Option C:	Only Z
Option D:	Centroid

Q23.	Nyquist plot is an extension of
Option A:	Bode plot

Option B:	pole zero plot
Option C:	root locus
Option D:	Polar plot

Q24.	Phase margin, in case of Bode plot, is determined wrt one line at
Option A:	-180
Option B:	180
Option C:	-90
Option D:	90

Q25.	In case of State space approach, initial conditions are
Option A:	considered as zero
Option B:	not considered as zero
Option C:	considered as negative
Option D:	neglected