

University of Mumbai
Online Examination 2020

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

Program: BE Mechanical

Curriculum Scheme: Revised 2016

Examination: Third Year Semester VI

Course Code: MEC601 and Course Name: Metrology & Quality Engineering

Time: 1hour

Max. Marks: 50

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

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Q1.	Gross error consists of
Option A:	Instrumental errors
Option B:	environmental errors
Option C:	human errors
Option D:	unknown errors
Q2.	Slip gauges are used in combination with
Option A:	micrometer
Option B:	vernier caliper
Option C:	clinometer
Option D:	sine bar
Q3.	Error is _____
Option A:	The smallest change in the measurand that can be measured
Option B:	The closeness with which a measurement can be read directly from a measuring instrument
Option C:	The difference between measured value and actual value
Option D:	A measure of how close the reading is to true size
Q4.	Which of the following property is not possessed by pneumatic comparator?
Option A:	Independent of operator skill
Option B:	Loss of accuracy due to gauge wear
Option C:	Speedy operation
Option D:	Total life cost is less
Q5.	What is the order of magnification in flow type pneumatic gauge?
Option A:	100 to 1000 times
Option B:	500 to 5000 times
Option C:	50 to 500 times

University of Mumbai
Online Examination 2020

Option D:	100 to 2000 times
Q6.	Pneumatic sensitivity in pneumatic comparators is _____
Option A:	Directly proportional to operating pressure
Option B:	Inversely proportion to operating pressure
Option C:	Directly proportional to geometrical area of orifice
Option D:	Independent of area of orifice and operating pressure
Q7.	What is the relation between overall magnification and pneumatic sensitivity in pneumatic comparators?
Option A:	Independent of each other
Option B:	Overall magnification is directly dependent on the square of pneumatic sensitivity
Option C:	Overall magnification is inversely proportional to the pneumatic sensitivity
Option D:	Overall magnification is directly dependent on the pneumatic sensitivity
Q8.	Which of the following property is possessed by Velocity type pneumatic gauge?
Option A:	Operate by sensing momentary rate of flow of air
Option B:	Response speed is less than back pressure type
Option C:	Low amplification
Option D:	Filter is placed after pressure reducing unit
Q9.	In Back pressure type pneumatic gauge, there are two orifices. What is the relationship between upstream pressure of first orifice and pressure between two orifices?
Option A:	Depends upon the distance between two orifice
Option B:	Depends upon relative size of orifice
Option C:	Only on geometric area of first orifice
Option D:	Distance between pressure source and first orifice
Q10.	After which frequency range, pneumatic measuring system is not correctly measured displacements?
Option A:	5 cycles/second
Option B:	4 cycles/second
Option C:	3 cycles/second
Option D:	2 cycles/second
Q11.	Which of the following is necessary for the complete study of surface roughness?
Option A:	Measurement of all the components of elements
Option B:	Analysis of all the component element
Option C:	Assessment of the effects of combined texture
Option D:	Measurement and analysis of all the components and assessment of combined texture
Q12.	Which of the following property does not belong to gear tooth?
Option A:	circular pitch of a spur gear is proportional to its module
Option B:	constant chord is independent of the number of teeth in a gear
Option C:	A gear tooth Vernier is used to measure the pressure angle
Option D:	Parkinson gear tester can also be used for checking individual gears

University of Mumbai
Online Examination 2020

Q13.	What precise movement does CMM have?
Option A:	Precise movement in x coordinate
Option B:	Precise movement in x and y coordinates
Option C:	Precise movement in y and z coordinates
Option D:	Precise movement in x, y and z coordinates
Q14.	Which type of CMM is most suited for large heavy workpieces?
Option A:	Cantilever type
Option B:	Bridge type
Option C:	Horizontal boring mill type
Option D:	Floating bridge type
Q15.	Which direction is sensed by a linear measurement transducer used in CMM?
Option A:	Positive direction only
Option B:	Negative direction only
Option C:	Both positive and negative direction
Option D:	Not used to sense directions
Q16.	Which of the following property does not belong to autocollimators?
Option A:	Has an infinity telescope
Option B:	Has an autocollimator
Option C:	For smaller angle it is not accurate
Option D:	Very high sensitivity
Q17.	Which of the following property is possessed by automatic position sensing autocollimator?
Option A:	Accuracy is affected by normal mains fluctuations
Option B:	There is no effect of lamp ageing on the accuracy of this instrument
Option C:	Instrument measure in all planes simultaneously
Option D:	It is not ideal for the repetitive checking
Q18.	Low cost, higher volume items requires
Option A:	no inspection
Option B:	little inspection
Option C:	intensive inspection
Option D:	Excess inspection
Q19.	Process control is carried out
Option A:	before production
Option B:	during production
Option C:	after production control
Option D:	During delivery
Q20.	The chart used to monitor variable is

University of Mumbai
Online Examination 2020

Option A:	Range chart
Option B:	Mean chart
Option C:	p-chart
Option D:	c-chart
Q21.	Dispersion of a process is monitored in
Option A:	Range chart
Option B:	Mean chart
Option C:	p-chart
Option D:	c-chart
Q22.	The control chart used for the number of defects per unit is
Option A:	Range chart
Option B:	Mean chart
Option C:	p-chart
Option D:	c-chart
Q23.	In Eddy current testing, balance bridge circuit is used for:
Option A:	Detecting the differential signal
Option B:	Displaying the flaw signals on screen
Option C:	Inducing the magnetic field in Bobbin probe
Option D:	Enhancing the frequency of AC
Q24.	For detection of subsurface cracks in MPI, we use:
Option A:	Magnetic Particles suspended in kerosene
Option B:	Dry magnetic particles
Option C:	Dye penetration method
Option D:	Resonance Method
Q25.	For a good quality image on a x-ray film, the desired parameter
Option A:	High film gradient
Option B:	High latitude
Option C:	Low film gradient
Option D:	Low latitude