

Program: BE Mechanical
Curriculum Scheme: Revised 2016
Examination: Third Year Semester VI

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

Time: 1 hour

Max. Marks: 50

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

Q1.	Systematic errors are _____
Option A:	randomly distributed
Option B:	regularly repetitive in nature
Option C:	distributed on both positive and negative sides of mean
Option D:	unknown errors
Q2.	The advantage of vernier caliper over micrometer is that it _____
Option A:	is easier and quicker to use
Option B:	is more accurate
Option C:	can be used to make both inside and outside measurements
Option D:	is less in cost
Q3.	Bevel protractor is used for
Option A:	linear measurement
Option B:	angular measurement
Option C:	surface roughness measurement
Option D:	gear measurement
Q4.	Which principle is related to Gauge design
Option A:	Gauge Principle
Option B:	Position principle
Option C:	Taylor's principle
Option D:	Carnot Principle
Q5.	'Go limit' applied to which limit condition?
Option A:	Maximum material limit
Option B:	Minimum material limit
Option C:	Lower limit of shaft and upper limit of hole
Option D:	Moderate material limit
Q6.	Which of the following property belongs to plug gauges
Option A:	Size difference between 'Go' and 'No Go' plug gauges is greater than the tolerance of tested shaft or hole
Option B:	Size difference between 'Go' and 'No Go' plug gauges is Equal to the tolerance of tested shaft or hole

Option C:	Size difference between 'Go' and 'No Go' plug gauges is less than the tolerance of tested shaft or hole
Option D:	Size difference between 'Go' and 'No Go' plug gauges more or less than the tolerance of tested shaft or hole
Q7.	Which of the following property is not applicable to faces of snap gauges
Option A:	Parallel to each other
Option B:	Square to each other
Option C:	Gauging point and work are in same plane
Option D:	Work and gauging faces are at 60 degree
Q8.	Which of the following can't be done by 'Go' plug gauges?
Option A:	Ensure bore align ability
Option B:	Controls diameter
Option C:	Check straightness of hole
Option D:	check degree of ovality
Q9.	What is the effect of wear on the size of 'Go' snap gauges?
Option A:	Decrease
Option B:	Increase
Option C:	May increase or decrease
Option D:	No effect
Q10.	What is the use of 'No Go' gauges?
Option A:	Check a single element of a feature
Option B:	Check several dimensions simultaneously
Option C:	Check roundness and size at the same time
Option D:	Check location and size at the same time
Q11.	What is a thread per inch in screw thread?
Option A:	Pitch in inches
Option B:	Axial distance moved by threaded part
Option C:	Reciprocal of pitch in inches
Option D:	Radial distance moved by threaded part
Q12.	What is dedendum for external threads?
Option A:	Radial distance between pitch and minor cylinder
Option B:	Radial distance between major and pitch cylinder
Option C:	Radial distance between major and minor cylinder
Option D:	Axial distance between major and pitch cylinder
Q13.	Which of the following statements defines property of screw thread?
Option A:	In three wire method, each flank of a thread is touched by a wire in axial plane section and this is valid only for a thread having rank angle
Option B:	Compression error is always subtracted from effective diameter value obtained
Option C:	Floating carriage type of micrometer is used for two wire method

Option D:	The value of θ is assumed 30° while calculating best wire diameter for With-worth thread
Q14.	_____ is used to measure the effective diameter of screw threads.
Option A:	Screw pitch gauge
Option B:	Screw thread plug gauge
Option C:	Screw thread caliper gauge
Option D:	Screw thread micrometer
Q15.	In a two-wire method, the diameter of the best-size wire is given by _____.
Option A:	$d = (p/2) \sec (x/2)$
Option B:	$d = (p/4) \sec (x/2)$
Option C:	$d = (p/2) \operatorname{cosec} (x/2)$
Option D:	$d = (p/2) \cot (x/2)$
Q16.	What does QA and QC stand for?
Option A:	Quality Assurance and Queuing Control
Option B:	Quality Adjustment and Quality completion
Option C:	Quality Assurance and Quality control
Option D:	Quality Adjustment and Queuing control
Q17.	What is QA?
Option A:	It is the measurement of degree to which a product satisfies the need
Option B:	Any systematic process used to ensure quality in the process
Option C:	Process of identifying defects
Option D:	It is a corrective tool
Q18.	Arrange the steps of QA in ascending order?
Option A:	Customer needs, material control, design development, process control, marketing
Option B:	Material control, process control, customer need, design development, finished product
Option C:	Customer needs, design development, material control, process control, finished product
Option D:	Material control, servicing, process control, material control, design development
Q19.	What is the first step of QA?
Option A:	Development of standards
Option B:	Identification of customer need
Option C:	Servicing
Option D:	Material control
Q20.	Which of the following is an example of QA?
Option A:	Verification
Option B:	Software testing

Option C:	Validation
Option D:	Documentation
Q21.	Control limits are _____
Option A:	Limits defined by customers
Option B:	Limits driven by the natural variability of the process
Option C:	Limits driven by the inherent variability of the process
Option D:	Statistical limits
Q22.	The distribution of measured data can be studied by using
Option A:	P chart
Option B:	R chart
Option C:	np chart
Option D:	C chart
Q23.	Non-destructive testing is used to determine
Option A:	Temperature
Option B:	Strength
Option C:	Toughness
Option D:	Defects location
Q24.	Which among the following is the last step in magnetic particle test method?
Option A:	observation and inspection
Option B:	circular magnetization
Option C:	demagnetization
Option D:	magnetization
Q25.	During radiography test, which region absorbs less radiation and transmits more?
Option A:	Low- and high-density regions absorb and transmit same amount of radiation
Option B:	High density region
Option C:	Low density region
Option D:	High radiation