	A True	D superiment	
	B. Fahe	D experiences, the relationship between the Residence and temperature is beauties as any	
		the September of Management and September 1997	
	A. Lawrence	No. of Concession of Concessio	
	Merr sensi	Nive than HIDs	
	II. was an	712n	
	A. Than	Street types of KTD de-	
	ft. False	remon types of KTD, the resistance increases as Temperature increases.	
		The state of the s	
	12. HTDe i ypin	tally have much higher numbed receiver values than therefore.	
	D. France	regular numberal printings unless these threathers	
	13,	- refers to the predominant direction of the wedness texture.	
	A. Ferm	- rathers for the prendent install direction of the workers were	
		The state of the s	
	C. Profile		
	D. Center line		
	14. The maide mi	Sufferences to one of the indirect treasuring instruments	
	A. True	and reserved dissecuting instruments	
	B. Fahr		
	-		
	Question 2; Define the first	And the West Community of the Community	
	Section and Divily	fowing Terminatory from the Sarface Trumes Experiment.	3.Exists
	A. Roughness		
1	l. Waylens		
i	l. Warings		
i	3. Wavinesa		
	i. Waviness		
	Leo		
	Leo		
D	Lay Profile		
D	Leo		
D	Lay Profile		
D	Lay Profile		
D.	Lay Profile Comprises		
D	Lay Profile Comprises		

can be used to measure the pitch size of an external thread.

- a. the micrometer
- O b. the vernier caliper
- O c. the three wires
- d. the pitch gauge

Clear my choice



























INCLUSI & LING.IVILASCINIVILINIS poard / My courses / 0936442102974 / General / Final exam Quiz I A bench micrometer was used to measure the major diameter of an external thread, given that the diameter of etten 1 the standard cylinder is 20.0000 mm, the micrometer reading over the standard cylinder was 20.9344, the tyet micrometer reading over the thread was 21.1342 mm, then the major diameter of the thread is equal to ----overed. arked out of Select one: Flag question @ a. 19.8002 mm b. 20.1998 mm Time left C. 22.0686 mm d. None of the above is correct Clear my choice The bottom of the groove between the two flanking surfaces of the thread whether internal or external 0

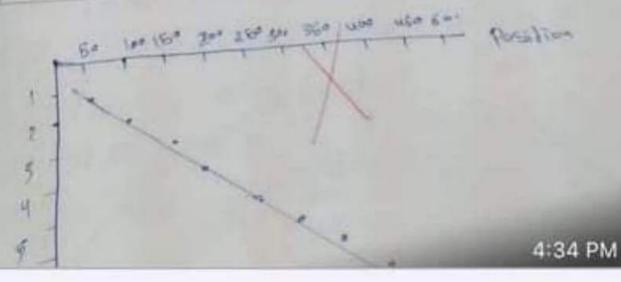
udent name: مراجع ما Student number: مراجع عبدالعبر المجرح section بالمجرع المعربية المعربية المحربية المحربية

mestion 1: (8 points)

surface was tested for straightness using an autocollimator and reflector; the readings are hown in the following table, if one second of arc increase in angle observed corresponds to a use of 0.25 micron of the front end of the reflector relative to its rear end.

- 1. Construct a profile graph of the surface relative to the initial points (0-50 mm). (5 points)
- Using the end points method to calculate the max deviation of the profile from the straight line. (3 points)

osition	Autocollimator reading	Difference from first reading	Rise or fall over 50 mm	Cumulative rise or fall	Adjustment required	error
mm	Sec	Sec	micrometer	micrometer		-
0		0	0			
0 -50	40	Mo	20			-
50-100	36	-4	-20		-	1
100-15		- 4	-20		1	1
150-20	The same of the sa	-12	-60	-	1	1
200-25	400	8	U.5	-	1	
250-36	100	20	1.0	-		
300-3	100	-11	-2.0		1	
350-4	95	-8	- U.O		-	1
100001162	20	-16	-8.0			
450-5		- 4	-7.0			-



In the strain gauge experiment a load of 2 N were applied at a distance of 250 mm from the strain gauge, the dimensions of the steel cantilever beam (b = 19.75mm), and (h = 4.75 mm) where b is the width of the cantilever beam and h is the thickness (the cross section area = b, h)

The sensitivity of the strain gauge : k = 2.05

The modulus of elasticity for steel : $E = 210000 N/mm^2$

The reading of the measuring instrument $U_A/U_E = -0.069 \ mV/V$.

Calculate the strain

O a. 7068.293 N/mm²

C

- O b. 7.068293 N/mm2
- O c. 0.033659
- O d. 3.3659 *10-5

13

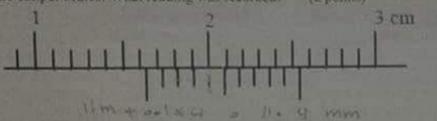
Question 1:

A. What size is the gauge block build-up used with a 5 inches sine bar to set the workpiece at an angle of 4° 30°? show your calculations (3 points)

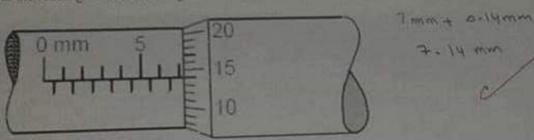
6 = 4.5° = L = 5 inche = 12.7 cm = 0.9996 cm =

B. A student used a vernier caliber to measure the diameter of a cylinder. The diagram shows an enlargement of the caliber scales. What reading was recorded? (2 points)

(2 points)



C. What is the reading of the following micrometer?



D. Using the following set of gauge blocks, what is the minimum number of blocks to be wrung together to produce an overall dimension of 47.765 mm

Show your calculations (3 points)

Metric 103 pieces	Increment		
1 piece (1.005) mm			
49 pieces (1.01-1.49) mm	0.01 mm		
49 pieces (0.5- 24.5) mm	0.5 mm		
4 pieces (25-100) mm	25 mm		
	weed Sblock		
25	we gauge		

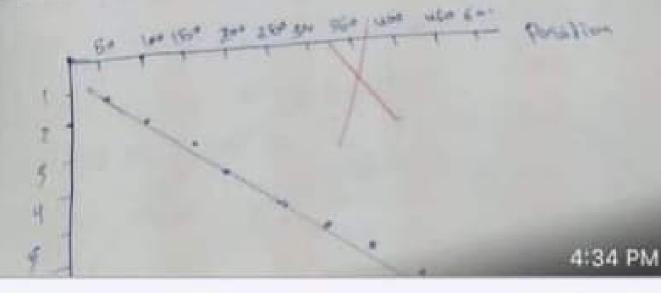
10 points

mestion 1: (8 points)

surface was tested for straightness using an autocollimator and reflector; the readings are hown in the following table, if one second of arc increase in angle observed corresponds to a ise of 0.25 micron of the front end of the reflector relative to its rear end.

- 1. Construct a profile graph of the surface relative to the initial points (0.50 mm). (5 points)
- Using the end points method to calculate the max deviation of the profile from the straight line. (3 points)

osition	Autocollimator reading	Difference from first reading	Rise or fall over 50 mm	Cumulative rise or fall	Adjustment required.	error
mm	Sec	Sec	micrometer	micrometer		
0		0	0			
0-50	40	U.O.	20			
50-100	36	- 43	-20			
100-150		- ta	-20		-	
150-20	242	-12	-60			
200-25	4.0	8	U.0		1	
250-30	447	20	1.0			
300-35	4.1	_ U.	-2.0			
350-40	26	- 3	-U.9			
400-45	20	_16	- 8.0			
450.50	100	_ U	-7.0			



191) 1) B 2) \$0 3) A 9) A 5) A 6) (7) (F 8) B 2) A (O) A 11) A 12) B 13) A 19) B

10) A

In order to calculate the error of straightness using Autocollimator a. we can use the least square method ut of O b. we can use the end points method c. both a and b are correct O d. none of the above is correct Next page ous activity himp to. od/quiz/attempt.php?attempt=307566&cmid=278524# 0

Question 3: (4 points)

Using the following set of gauge blocks, list the minimum number of blocks to produce an

Using the following se	ton gaut	mm (chow	your calculations)
Using the following so overall dimension of	100:995	mm. (snow	

Metric (103) pieces Increment				
	Increment			
piece (1.005) mm	0.01			
9 pieces (1.01 to 1.49) mm	0.5			
49 pieces (0.5 to 24.5) mm 4 pieces (25- 100) mm	25			

B. Why do we always choose the minimum number of blocks combinaton? end standard measurment & calibration because accuracy Reading

Colominitar ids device using for angular measurement van Questian 4: (6 points) Describe the working principle of the clinometer face aligned hor each other put the colombour on face oneck the reading of Bubble equal zero if not you have more know and reversal untill the Bubble gives zero reading colominator consist of two Scale main scale in degree vernier scale The reading in second by reverse work pices after that all all resar to set the movement of all allighed measure angle

15 a component of measurement of the move widely spaced component of surface texture

	A. True B. Fafor 10. Thermi store are
	B. More sensitive than RTDs
	A. True B. False
	A. True B. False
	A. Form II. Lay C. Profile D. Centur line
	14. The inside rescriments is one of the indirect measuring instruments 3. False
	Overfice 2; Define the Billiewing Terminology from the Sorface Tenner Experiment. 5 Point A. Roughness
	D. Warrison
C	Lay
р	Profile
E	Corner Sea
F I	Folesmi

Name of Buckey property

	I state only be neglect assessment	t a land
	Time and when you the comment	
	ancie the vention of Butches equa	l reprint
	the the ways and remarks on	is the smaller
	and the first	SEALE OF T
	divided State in	
Question 3:	one reading in second was reading to	per live

the federal party of our second of our registers or orall alternative processed to a reach \$121 on the fruit peak of the self-rate relieves to the west and

A. Conserved a profile graph of the methylgradeless on the methylgraph MA Ad process. M. Countain the evaluation for taking of the profits to on the oranges from many the least source

exchant (to perma)

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	tel			0				1808	215	
			0	4	The last	1	300	-150	204	-1.71
58-100	38	-1	10:5			113	1450			133
100-110	10			4 16 5		11.5				G-1 43
150.780	12					0	-52		125	-1.33
295-256	14			1000		THE.	0			4.43
256,700	24								1.500	
365.35e	34								· F40	
174-496	30					135				
#18-436	11				13		100		1340	
439-590	- 19		100		1 15		150	E.C.	-	15

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1 - m 3

Ca-137 (WAY = 150)

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138-55 3 1542 Feb.

OF Wheel

1 - 17 K

In the strain gauge experiment a load of 3 N were applied at a distance of 250 mm from the strain gauge, the dimensions of the steel cantilever beam (b = 19.75mm), and (h = 4.75 mm) where b is the width of the cantilever beam and h is the thickness

(the cross section area = b, h)

The sensitivity of the strain gauge: k = 2.05

The modulus of elasticity for steel: $E = 210000 N/mm^2$

The reading of the measuring instrument $U_A/U_E = -0.104 \, mV/V$.

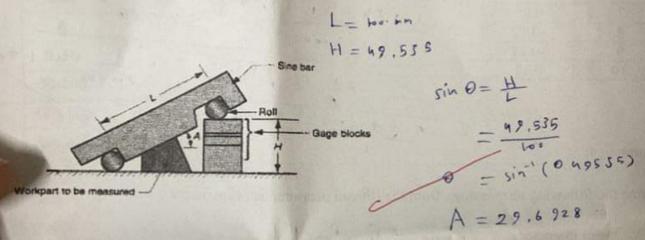
Calculate the strain(ε), the experimental value of the stress (σ), and the theoretical value of the stress (σ).

2/6

A. Describe the working principle of the clinometer.

the clinometer is special case of the application of sipiral level in this instance level is mountar in Me relatable body carried in housing are face of which forms the base of an instrument

B. A sine bar was used to measure the angle (A) of a certain specimen as shown in the following figure, the center-to-center distance between the cylinders on the sine bar (L) is equal to 100 mm. and the height of the block gauges (H) was equal to 49.535mm. Calculate the angle A.



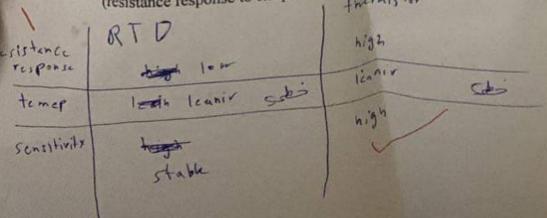
Question 6:

7 Points

A. Write three reasons why the thermocouple has been popular choice over the years.

@ 11: ver archaint availability It's very a vechant

B. Compare between the RTD and the thermistor, include the following in your answer: (resistance response to temperature change, and sensitivity)



lainer

Quanties 3:

A bench micrometer was used to measure the dimensions for an external thread, the readings are given as:

The rending over the thread = 9.6326 mm The reading over the cylinder -9.7236 posts The rending over the thread (with wires) " 10.0766 mm The reading over the cylinder (with wires) = 13.283Fmm The reading over the thread (with prisms) = 11.9356 mm The reading over the cylinder (with primm) = 15.5464 mm

And you know that the diameter of the standard sylinder is equal to 30,0000 sum the florid angle of the thread $(\theta) = 30^{\circ}$, the diameter of the wire (d) = 2.0207 sum , and the pitch size of the thread (p) = 3.5 mm

The effective diameter equation is $D_{eff} = T + \frac{E}{r} \cot \theta - (\operatorname{covec} \theta - 1) \circ d$ where T is the dimension under the wire

Calculate the major diameter, the miner diameter, and the effective diameter of the thread. (Show your calculations)

In the strain gauge experiment a load of 2 N were applied at a distance of 250 mm from the strain gauge, the dimensions of the steel cantilever beam (b = 19.75mm), and (h = 4.75 mm) where b is the width of the cantilever beam and h is the thickness

(the cross section area = b.h)

The sensitivity of the strain gauge : k = 2.05

The modulus of elasticity for steel : $E = 210000 \ N/mm^2$

The reading of the measuring instrument $U_A/U_E = -0.069 \ mV/V$.

Calculate the strain

O a. 7068.293 N/mm²

C

- O b. 7.068293 N/mm²
- O c. 0.033659
- O d. 3.3659 *10-5

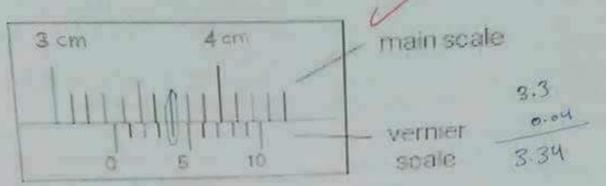


(91) 1) B 2)\$0 3) A 9) A 5) A 6) (7) (8) B 9) A (O) A 11) A 12) B 13) A 14) B

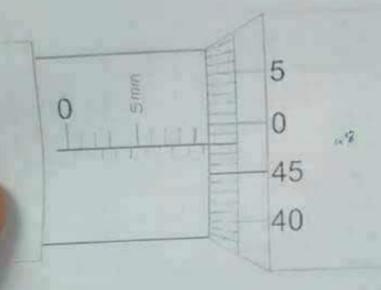
9) True 10) A

Question 2: (12 points) Fill in the space:

A. The reading of the following vernier caliper is 3.34 cm and the accuracy is -0.05 mm



B. The reading of the following micrometer is _9.28 wwo and the accuracy is _0.1_www.



C. The reading of the following vernier bevel protractor is 49. 20., and the accuracy is _0.05



6 Points

Using the root mean squared (RMS) method of surface roughness calculate the value of the surface roughness for the following ordinates obtained from testing a work piece of a length equal to 0.5 mm, where h are the ordinates of surfaces from mean line, and the vertical magnification factor is equal to 2000000 times.

ordinates	h(mm)
1	0.45
2	- 0.55 -
3	0.65
4	0.20
5	-0.35
- 6	0.12
7	0.06 -
8	-0.12
9	-0.17 -
10	0.12

cla = hmas -hab	4/2
Mag hiticates	
= 0.65-(-0.55)	1×10-6
(1.54) 4- (1.25)	2.9 X10 ==
5 1 2 00000	- 1
VEh= 1 10 10 10 10 10 10 10 10 10 10 10 10 1	200000

0.5

Question 4:

Define the following terminology from the (thread measurement experiment)

- 1. major diameter d'major = D (Ren-Re)
- 2. minor diameter) minor = D (R) R)
- 3. crest the tooth of cist.

	Tens Lin Acres	
ion 1 et ered	the bottom of the groove between the two flanking surfaces of the thread, whether external or internal is called	
ed out of	a, the root of the thread	
	O b. the crest of the thread	10 10 20 20 21
ig tion	O c. the flank of the thread	四 国 冠 35
	O d. the angle of the thread	Finish attempt _
	Clear my choice	
yet yet wered ked out of lag	Thermistors exhibit a fast response rate, they are limited for use up to the 300 °C temperature range. This, along with their high nominal resistance, helps to provide precise measurements in lower-temperature applications. Select one: True False	
	Nart poge	

8

d out of

question

if the smallest division of the main scale of the vernier caliper is 1 mm, and its vernier scale is divided into 10 divisions, then the accuracy of the device is

Select one:

- a. 0.01 mm
- b. 0.1 mm
- O c. 0.05 mm
- 0 d. 1 mm

Clear my choice

In an external thread, the distance between two consecutive crests parallel to the axis of the thread is called

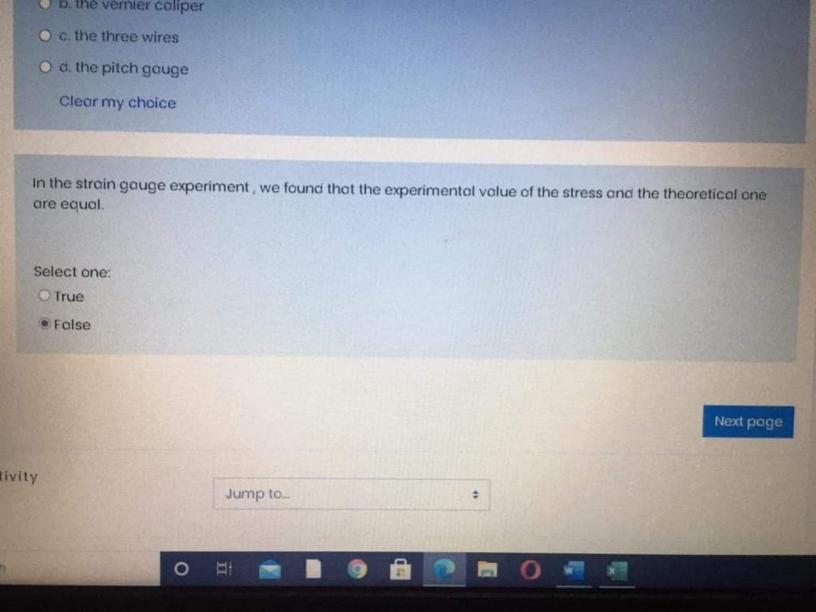
- o. the pitch size
- b. the lead of the thread
- oc. the height of the thread
- d. the major diameter of the thread

A

if the smallest division of the sleeve of the micrometer is equal to 0.5 mm and the number of divisions on the thimble scale is equal to 50 divisions, and the number of divisions on the veriner scale is 10 divisions then the accuracy of the device is equal to ------

- a. 0.01 mm
- O b. 0.02 mm
- O c. 0.001 mm
- O d. 0.002 mm

C?



Clear my choice

The accuracy of the vernier bevel protractor is

Select one:

stion 21

rked out of

Flag question

yet wered

- a. 1 min
- O b. 2.5 min
- c. 5 min
- O d. 1 degree

Clear my choice



Question 2: (14 points). A. Describe with a simple sketch the working principle of the autocollimator. (6 points) is a instanced that a forcett mater and mean continued a provider tout an estimate profession on that all or part of the highly to an instrument that Record the light with _ not offerful The Anciental Ecolobe He south on between the smallest right and affected se he office Brown as To D enforced maker our tight there is no control with the suffer the shet donated Affect on a screening measurement. B. Describe the working principle of the clinometers (4 points) Chimmeter is server to musice me included tigle endown tow include that we Pik the dimension on one of the surprise me cheek it he builded in in zero could intend who knows so reserve the hubble much pro- subs me modely a report of on the second dispuse and her made extende se different without se mylinge C. Does the external micrometer obeys to the Abbe's Principe? Explain (4 points) A. Using the following set of gauge blocks, fire the minimum number of blocks to produce an overall Question 3: (4 points) dimension of .76,575 mm. (show your calculations) Metric (103) pieces Increment 1 piece (1.005) mm 0,01 49 pieces (1.01 to 1.49) sum 49 pieces (0.5 to 24.5) mm 0.5 25 4 pieces (25- 100) mm 40 B. Weste two applications of block gauges is the dealy to me amount of figures 4) In my want mount

Final exam Measurement lab (0906442)

Fing Lamons Al-Durgham

Student name	map, Bulletik	
-	Market ev	- Inthe -
Street, the best success for each of the train		13.Fale
no the factors of the factors		

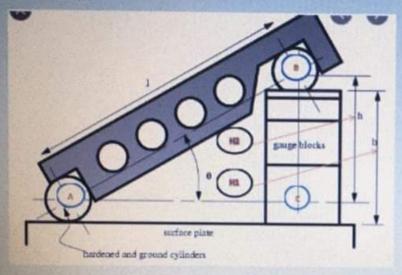
- I What director in consider to an RTII true has a regarder temperature conflictment
- A. Nears prope
- ft. Thermoor
- C. Negative-type RTD
- D. Thermintople
- 2. Temperature sampling until he actioned by the use of
- A. Thermorepies
- D. RITTE
- C. Thermines
- D. All of the shows
- 3. The output voltage of a typical theremosayte is
- A. Jess than 100 ocV
- B. groupe than I V
- C. Thermocouples vary resistance, not reclaim
- Dt. Name of the above
- A. The commentums to a florescouple:
- A. can produce an unwanted theretocough affect, which must be compensated for
- B. produce an extra desirable theresecouple affine
- C. must be protected, since high voltages are present
- D. built B and C are correct
- 5. The purpose of compensation for a florestologist in
- A. to execut assumed virtuge susper of a feature angle
- H. Hi-discrease hongerouses saturally by
- C. to increase voltage surper
- D. used for high-temperature circults
- A. The strain pauge recisions a selice with
- A. Vibration
- O. Host.
- C. Weight
- D. Bendey
- T. HTD stands for
- A. Relative Thorntal Devices
- M. Radioschive Thermosochear Diputer
- C. Revotation Temperature Discourse
- Emission Temperature Devices
- The decrease of secretaria with the temperature increase is a property off.
- A Theremoniple
- ж. Biometallic Mayresmeater
- Develope
- RETUR 18

Final stam.

	Measurement lab (0906842)	Fing Laineau Al-Durghuse enzy, 8,2018	
	Studeni name:		
	Constitute \$2. Telect the best minery for you's of the following pursuing		(\$.7m)
1000	When device is similar to an RTD but has a negative tests htrain gauge Thermanian Negative-type RTD Thermanapper	persone positioner	
B			
A			
ARCD	The commutatorys to a therrecommutation produce an assessment theretocomple pilloys, which must produce an avera designable thermocomple affect must be produced, since high colleges are present both III and C are correct	te componented for	
HAMUD	The pippose of compression for a disensionaria in to custed severated voltage output of a themsoningle to decrease temperature arealtivity to increase voltage output used for high reseperature citosis.		
C	The street gauge resistance rather with: Vibration Heat Watght Bending		
A	RTD stands for Relative Thormas Devices Endougher Thormas Sear Dipoles Revisioner Temperature Directors Busining Temperature Directors		
1 1	he decrees of resistance with the temperature increase in a p	reparty of	

- A
- Thermosaple timeselfs thermosale Demosar WID
- a US

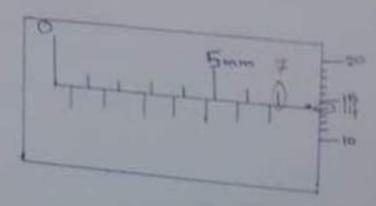
If the length of the sine bar (L = 100 mm), and the height of the gauge blocks (h=50 mm), then the angle theta is equal to -----



- O a. 30 degree
- O b. 45 degree
- O c. 60 degree
- O d. none of the above is correct

30

De



-> 7.14 mm

WE THE CHI

What size is the garge block bull-up used with 9 to liches sine bar to set the work price at an angle of 4°30'? Show your calculations

النوال الثالث - 7 علامات

Describe the working principle of the Auto collimator? The Auto Collimentor is an optical device Used to measure small angles with very high sensitivity. The Auto collimator projects abeam of collimated light. An external reflector reflects all or part of the beam back into the instrument where the beam is focused and detected by aphobaletator

the Auto Collimator measures the devication between the

surface was tested for straightness using an autocollimator and reflector; the readings are hown in the following table, if one second of arc increase in angle observed corresponds to a ise of 0.25 micron of the front end of the reflector relative to its rear end.

- Construct a profile graph of the surface relative to the initial points (0-50 mm).
- 2. Using the end points method to calculate the max deviation of the profile from the

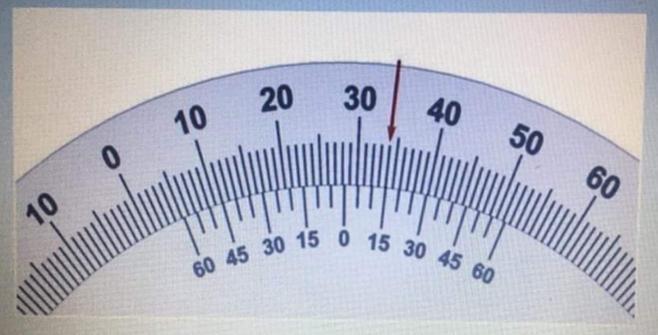
Position	Autocollimator reading	Difference from first	Rise or fall over 100 mm	Cumulative rise or fall	Adjustment	error
mm	Sec	reading			required	
0		sec	micrometer	micrometer		
0 -50	8	0	0	a	Ø	
50-100	10	0	0	0	1	4
100-150	18	2	0.5	0.5	2	
150-200	22	10	2.5	3	3	
200-250	24	14	3.9	6.5	.4 *	74
250-300 300-350	14	1	14	10.5	5	
350-400		-	1.5	12	6	
400-450	16	2	0.5	12.5	7	
450-500	18	1/0	2 5	14.5	8	
	20	12] 3	20	7	
	m = -	- E	2 2 =	1	10	

$$C = \sqrt{6 - n\pi}$$

$$= 1.8191 - 29. \times 12.2$$

$$= -3.173.1817$$

The reading of the vernier bevel protractor is



- O a. 28 degrees and 34 minutes
- O b. 28 degrees and 15 minutes
- O c. 34 degrees and 15 minutes
- O d. 15 degrees and 34 minutes

B

Jacobins, 4:

In the strain gauge experiment a load of 2 N were applied at a distance of 250 mm from the strain gauge , the dimensions of the steel cantilever beam (h = 19.75mm), and (h = 4.75mm) where b is the width of the cantilever beam and h is the thickness (the cross section area = b, h)

The sensitivity of the strain gauge : $k \approx 2.05$

The modulus of elasticity for meel: $E = 210000 N/mm^2$

The reading of the measuring instrument $U_A/U_E = -0.069 \text{ mV/V}$

- A. Calculate the strain(ε), the experimental value of the stress (σ), and the theoretical value of the stress (σ) .
- B. Comment on the results of the stress you calculated in A.

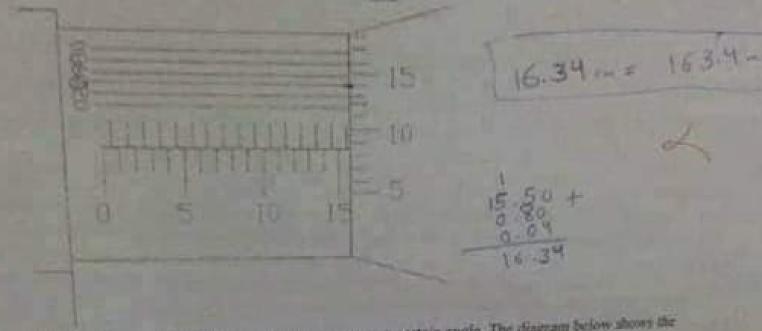
The block gauges can be used to check the accuracy of the micrometer

Select one:

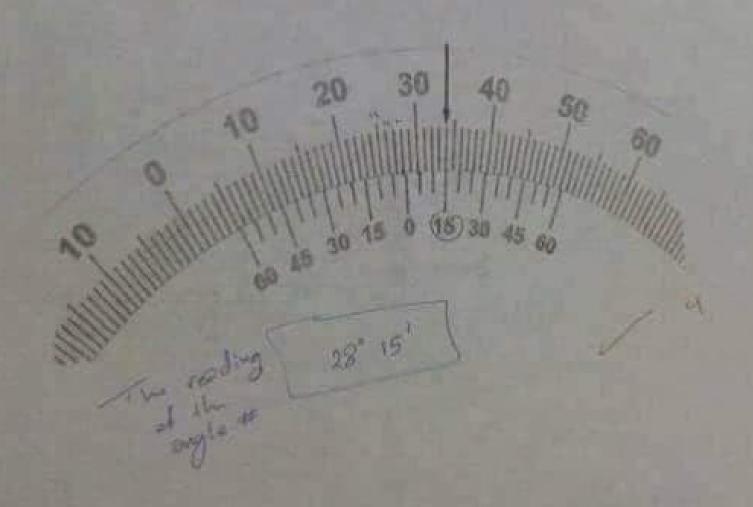
True

- a. True
- b. False

A student used a vernier micrometer to measure a certain dimension. The diagram shows an enlargement of the micrometer scales. What reading was recorded? Note; the dimensions on the sleeve are in mm.



B. A student used a vernier bevel protractor to measure a certain angle. The diagram below shows the reading of the angle. What reading was recorded?

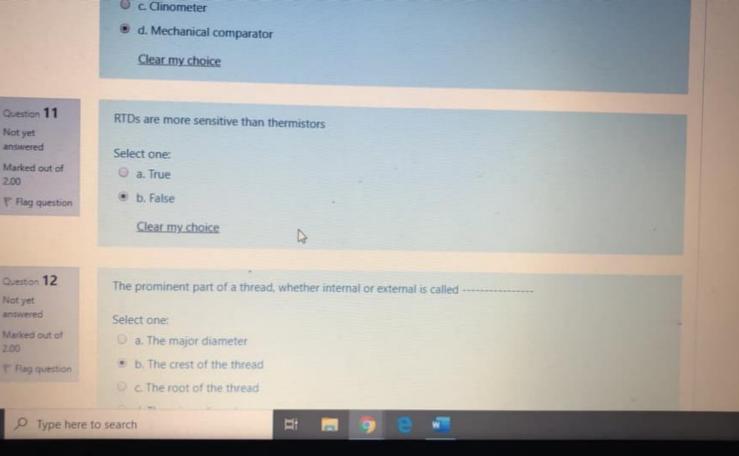


We can use ----- to measure wires, spheres, shafts, and blocks.

Select one:

- a. External micrometer
- b. Internal micrometer
- c. Depth micrometer
- d. Gauge blocks
- e. None of the above is correct

if the smallest division of the main scale of the vernier caliper is 1 mm, and its vernier scale is divisions, then the accuracy of the device is



Question 11

Question 12

Marked out of

Not yet answered

Not yet answered

2.00

- O c. Line standard measuring devices
 O d. None of the above

 RTD stands for

 Select one:
 O a. Relative Thermal Devices
 O b. Radioactive Thermonuclear Dipoles
 O c. Resistance Temperature Detectors
 O d. Resistive Temperature Devices
 - G. Resistive Temperature Devices

Clear my choice

The external micrometer is one of the indirect measure.

O a. True

Select one:

of

stion

-

c. Thermistors have either a NTC or a PTC, but

Clear my choice

The firm joint calipers are examples of

Select one:

- a. Direct measuring vevices
- b. Indirect measuring devices
- c. Line standard measuring devices
- d. None of the above

The bottom of the groove between the two flanking surfa

Select one:

- a. The major diameter
- b. The crest of the thread
- the root of the thread
- 9 he minor diameter

The bottom of the groove between the two flanking surfaces of the thread whether internal or external

Select one:

ut of

uestion

- a. The major diameter
- b. The crest of the thread
- c. The root of the thread
- d. The minor diameter

Clear my choice

d. bott A and b are correct

Clear my choice

A bench micrometer was used to measure the major diameter of an external thread, given that the diameter of the standard cylinder is 20.0000 mm, the micrometer reading over the standard cylinder was 20.9344, the micrometer reading over the thread was 21.1342 mm, then the major diameter of the thread is equal to

Select one:

- a. 19.8002 mm
- **b.** 20.1998 mm
- C. 22,0686 mm
- d. None of the above is correct

Clear my choice

If the smallest division of the main scale of the vernier caliper is 1 mm, and its vernier scale is divided into 10 divisions, then the accuracy of the device is

Select one









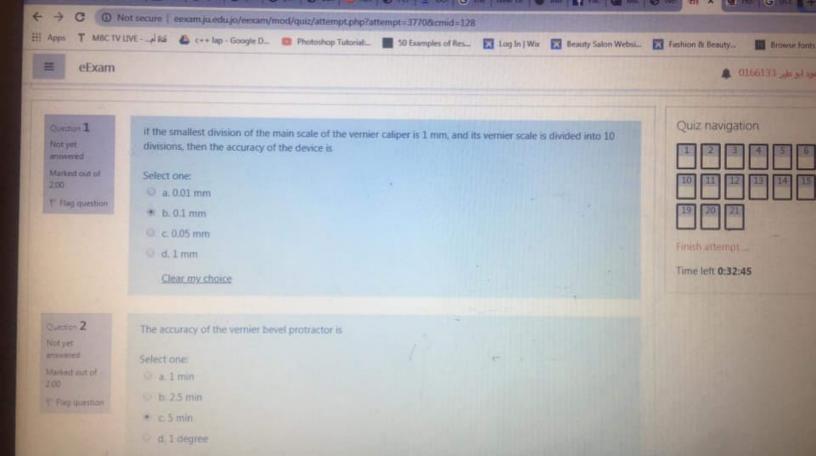




(92)

(A) is a component of surface texture.

(B) measurement of the more widely spaced component of surface texture



C. Using the following set of gauge blocks, what is the minimum number of blocks to be wrong together to produce an overall dimension of 37.

Metric 103 pieces	27.07311
1 piece (1.005) mm	Increment
49 pieces (1.01-1.49) mm	0.01 mm
49 pieces (0.5-24.5) mm	0.5 mm
4 pieces (25-100) mm	25 mm

D. Compare between line standards and end standards; give an example on each type

line shoulded; - to the mostument may be substitution to 1.5, 2.1, 8.8 somewhat end standards to the point that we receive found at the end feet not colding Lo 5, 2, 3, 4 as ex as were 14 points

A surface was tested for straightness using an autocollenator and a reflector, the readings are shown in the following table, if one second of are increase in angle observed corresponds to a rise of 0.25 merce of A. Construct a profile graph of the surface relative to the initial points (0. 50). (4 points) exthe front end of the reflector relative to its rear end. the maximum deviation of the profile from the straight line using the end points

d Mechanical comparator The prominent part of a thread, whether internal or external is called Select one: a. The major diameter U b. The crest of the thread A bench micrometer was used to measure the major diameter of an external thread, given that the diameter of the standard cylinder is re to search

Question 1:

- A. 15.584 mm
- B. 28'15'

- 25

Which of the following is correct

Select one:

- a. All thermistors are classified as a PTC devices
- b. All thermistors are classified as a NTC devices
- c. Thermistors have either a NTC or a PTC, but the first is more common.

Clear my choice



Which of the following is considered as manufacturing configuration of the RTD

Question 2:.-

A. 3.34 cm

.01 cm - vernier caliper

-01 mm

- micrometer

C. 50° 20'

5' (5 minute)

Marked out of 2.00

P Flag question

The pitch diameter of the thread is another name for the effective diameter

Select one:

- a. True
- D. False

Clear my choice

Question 18

Not yet answered

Marked out of 2:00

F Flag question

The block gauges are examples of end standard

Select one:

- a. True
- O b. False

Clear my choice

$$Qq)$$
 $S = E * E$ Qq $= -3.36 \times 10^{-5} \times 210000$ $= -7.056 Mpa$

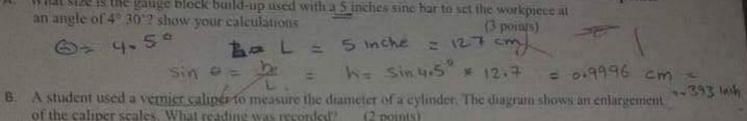
A bench micrometer was used to measure the major diameter of an external thread, given that the diameter of the standard cylinder is 20.0000 mm. the micrometer reading over the standard cylinder was 20.9344, the micrometer reading over the thread was 21.1342 mm, then the major diameter of the thread is equal to ------

Select one:

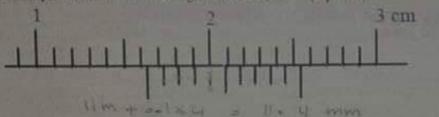
- a. 19.8002 mm
- b. 20.1998 mm
- c. 22,0686 mm
- d. None of the above is correct
 - Clear my choice

Question 1:

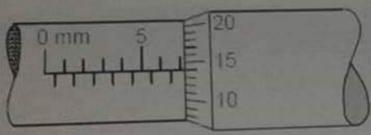
A. What size is the gauge block build-up used with a 5 inches sine bar to set the workpiece at

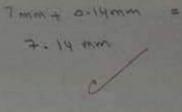


of the caliper scales. What reading was recorded? (2 points)



C. What is the reading of the following micrometer?





10 points

D. Using the following set of gauge blocks, what is the minimum number of blocks to be wrung together to produce an overall dimension of 47.765 mm

(autorious (3 nomis)

Metric 103 pieces	Increment
1 piece (1.005) mm	
49 pieces (1.01-1.49) mm	0.01 mm
49 pieces (0.5- 24,5) mm	0.5 mm
4 pieces (25-100) mm	25 mm

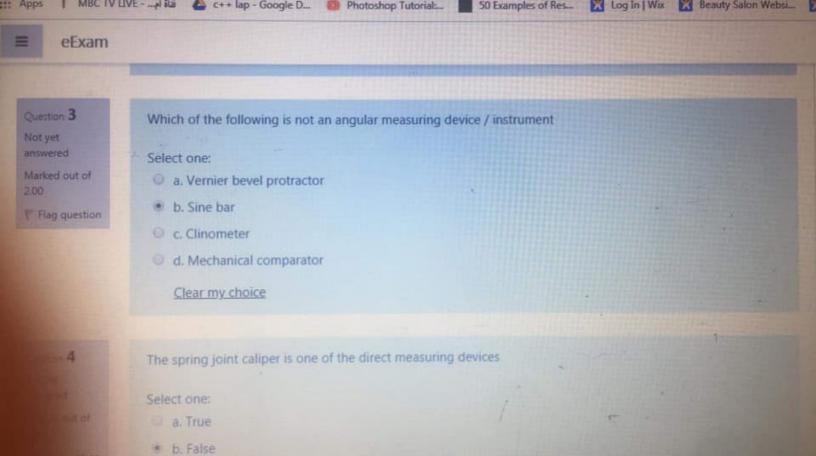
45.50 45 . 0

The bottom of the groove between the two flanking surfaces of the thread whether internal or external

Select one:

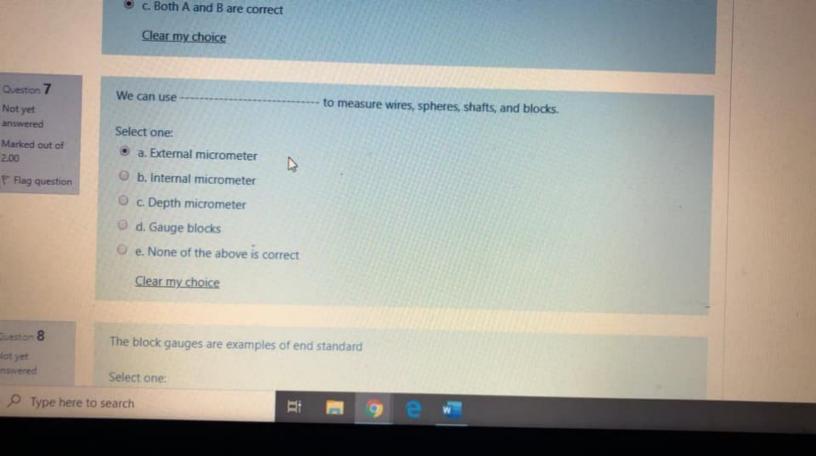
- a. The major diameter
- b. The crest of the thread
- c. The root of the thread
- d. The minor diameter

Clear my choice



a. Heating b. Cooling c. Bending d. Both A and B are correct Clear my choice The spring joint caliper is one of the direct measuring devices Select one: a. True b. False 3 Clear my choice A beach micrometer was used to measure the major diameter of an exten

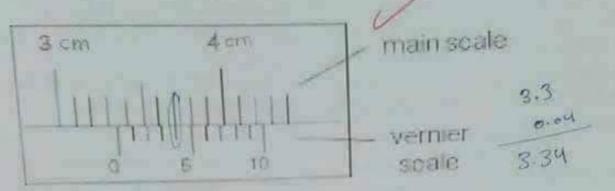
the standard cylinder is 20,0000 mm, the micrometer reading over the star micrometer reading over the thread was 21,1342 mm, then the major diam



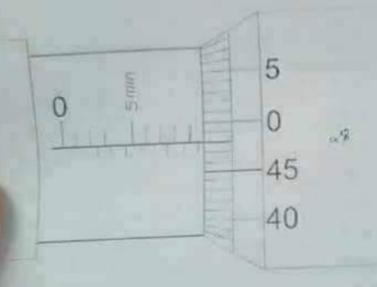
In order to measure the effective diameter of the external thread using a bench micrometer, it is required to measure the major diameter Select one: a True O b. False We can use to measure wires, spheres, shafts, and blocks. b. Internal micrometer. d. Gauge blocks e. None of the above is correct search

Question 2: (12 points) Fill in the space:

A. The reading of the following vernier caliper is 3.34 wand the accuracy is 0.05 www.

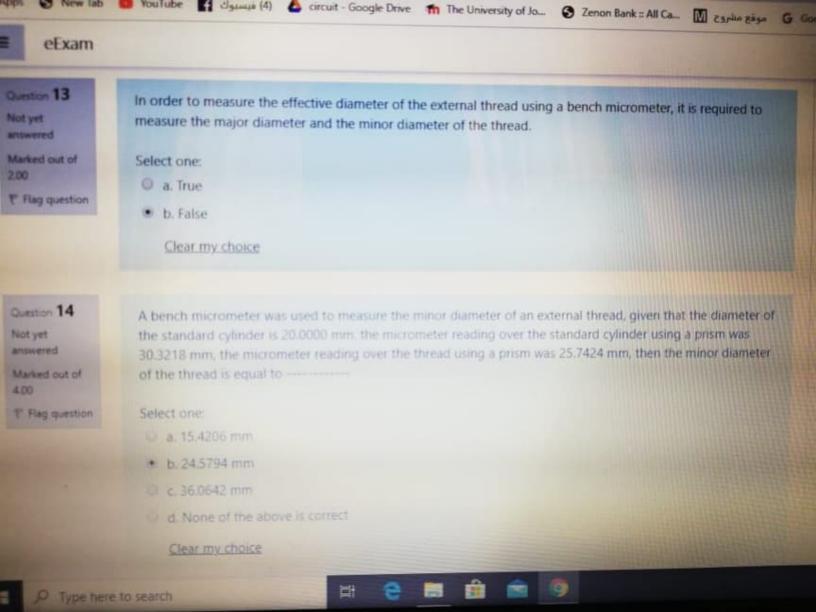


B. The reading of the following micrometer is _9.28 mm and the accuracy is _0.1 _ mm



C. The reading of the following vernier bevel protractor is 49 20, and the accuracy is 0.05





$$T = 30 + (10.0766 - 13.2838)$$

if the smallest division of the main scale of the vernier caliper is 1 mm, and its vernier scale is divided into 10 divisions, then the accuracy of the device is

Select one:

- a. 0.01 mm
- b. 0.1 mm
 - c. 0.05 mm
- d. 1 mm

Clear my choice

A bench micrometer was used to measure the major diameter of an external thread, given that the diameter of the standard cylinder is 20,0000 mm, the micrometer reading over the standard cylinder was 20,9344, the micrometer reading over the thread was 21,1342 mm, then the major diameter of the thread is equal to

Select one:

15

stion

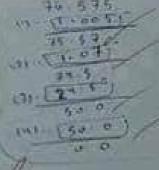
Question 2: (14 points) A. Describe with a simple sketch the working principle of the autocallimator (6 points) is a whopen that into collamator and been collected a painter "light an extend reflected reflect all or part of the light to an intermed the light The about about the sound in some he wanted tople and of which to se he attimate Brook he for I entercationales our light place to its control with the suffice 5. We wish densit affecting to a solution measure of B. Describe the working principle of the clinometers (4 pours) Commenter is series to make no included angle beforem for surfaces that we Pull the discounter on the of the surfaces and chance if he co-toble a in seem threat of mak we know to report the buildie and they have the moding a report it in the second surface and their the extended the of Parente without the mystyle C. Does the external micrometer obeys to the Abbe's Principe? Explain (4 points) Question 3: (4 points) A. Using the following set of gauge blocks, list the minimum number of blocks to produce an overall dimension of 76.575 mm. (thow your calculations)

Metric (193) pieces					
	Increment				
1 piece (1.805) mm		NEV			
49 pieces (1.01 to 1.49) mm	0.01				
49 pirces (0.5 to 24.5) mm	0.5				
4 pieces (25-100) mm	25				

B. Write two applications of block gauges

13.

2) 2- my month reserved



Not secure | exampleedujo/exam/mod/quiz/affempt_php?attempt=3753&cmid=128

ame- 11

ot yet MARKET B

latic bare

Fing question

RTDs are more sensitive than thermistors.

Select one:

a. Teiser

h False

Clear my change

12

SOFT OF STREET,

MigRad out of

- 23

If the siester

The spring joint caliber is one of the direct measuring devices

m. Trian

Question 2:

Describe the working principle of the Unionetes

WEIGHT

of myle

for angler meeter meet a snow from such where put the chapmen check the residing of Bubbles time to move knops and remotel and the subject consist of zero reveling clion meter centreer scale in in digite BO I EUTSE SELLE centing in second after that notel EAN 14 points | +we Question 3: ELF saligned

A surface was tested for straightness using an autocollengior and a reflector, the readings are sharin in the following table, if one second of arc increase in angle observed corresponds to a rise of 0.25 micron of the front end of the reflector relative to us rear end

A. Construct a profile graph of the surface relative to the initial points (i.e. 5to. 18 points)

B. Calculate the maximum deviation of the profile from the straight line using the least square

Position	Autocollimator reading	Difference from first reading	Hise of fall over 50 mm	Complative rise or fall	opposite	into	(X-X)	(E-0)	Xm Hat	vis (
Mm	Sec	VEC	mitrus	micron			-250	30	125	-0037
0	0	0	0	0	-7	1	1.26		1 940	-11.22
0.50	pa かでは、まま	0:	0	0	1	1.5	-130	113		-7.07
50-100	20	-2	-6.5	10.5	14	1.5	- WD	-52		1-2-22
100-150	18	129	-1-	-1.5	1	0	-50	-3.3		-5.97
150-200	12	-10	13.5	-85	18	-0.75	0	127.5		-4.12
200-250	16	-6	215	-9.5	6	115	59	-80		
250/300	76	14	100	14	13	-3	100			
100-350	24	3		- 45	3.75	1.5		- 5	2 -1230	The second second
350-100	26	101-	THE P.	-21	1 5	-3	2,00		7 - 24	4 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
400-450	12	- 19	100	-10	10	0	15	1-31		14.18
1 450-500	10.	18	1000	- 7.00					error	

- HRATES

Marked out of 4.00

P Flag question

A bench micrometer was used to measure the minor diameter of an external thread, given that the diameter of the standard cylinder is 20,0000 mm. the micrometer reading over the standard cylinder using a prism was 30.3218 mm, the micrometer reading over the thread using a prism was 25.7424 mm, then the minor diameter of the thread is equal to -----

Select one:

- a. 15.4206 mm
- b. 24.5794 mm
- c. 36,0642 mm
- d. None of the above is correct

Clear my choice

































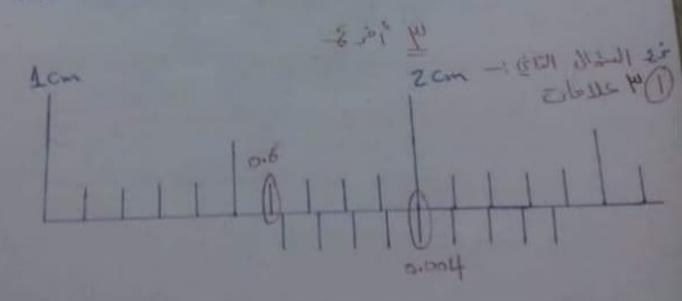
ALL "Therescopiles - RTDs . Thermstors"

to - which of the following are manufactured using sensing element: RTDs

11 - Which of the following are more common and active RTDs - Thermister - Thermometers - Thermometers - Thermometers

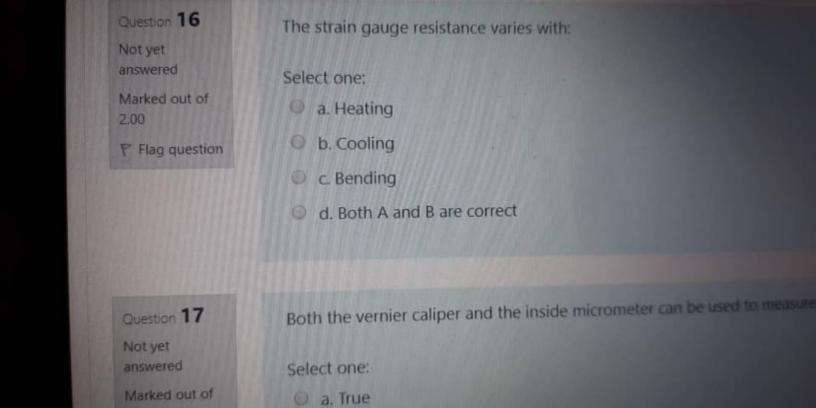
12 - specification of Applications in thermometers: in Finds on

13- In thermocraple a small open-circuit voltage are produce which the the voltage value equal colors disable des all

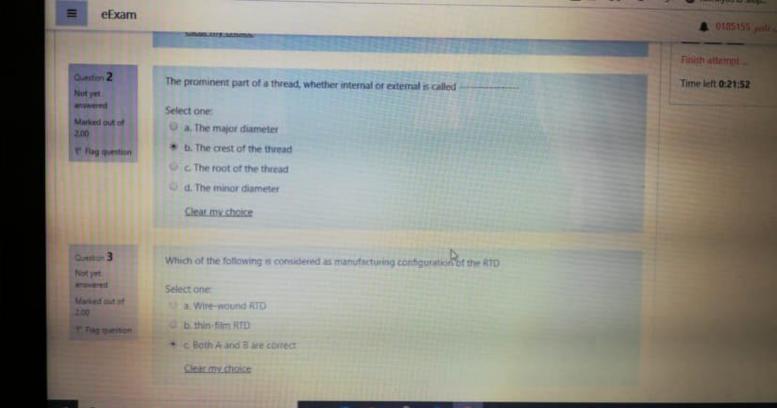


=> 1.64 cm

2



Error of the form . Schooldary texture primary texture. As a increases, the roughness increases. Note: it doesn't matter where we choose the reference line "Park to valley". Crossport we only considered two points to calculate recognises . inaccurate. 30 points hoght of mogularities. 5 peaks peaks a del and 6 valleys valley o bis R. (71+1/2+1/2+1/2) - (72+1/2+1/2+1/2+1/0) upus 5 VMF Thes (Root Mean Square) using -Area above CL. Area below it OCLA method.



Question 1
Not yet
answered
Marked out
2.00
P Flag que
Question 2
Not yet
answered
Marked out
P Flag ques

ion

In order to measure the effective diameter of the external thread using a bench micrometer, it is required to measure the Select one: a. True • b. False Clear my choice

Select one:

RTD stands for

a. Relative Thermal Devices

b. Radioactive Thermonuclear Dipoles

c. Resistance Temperature Detectors

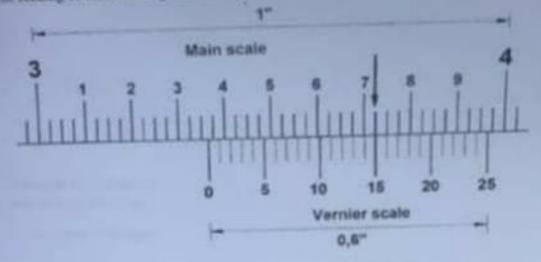
d. Resistive Temperature Devices

Clear my choice

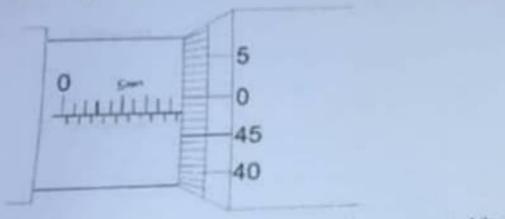
Question 2: (12 points)

Fill in the space:

A. The reading of the following vernier caliper is -----, and the accuracy is -----



--, and the accuracy is --B. The reading of the following micrometer is -----



C. The reading of the following vernier bevel protractor is -----, and the accuracy is ---



15	The block gauges can be used to check the accuracy of the micrometer	
d	Select one:	
out of	a. True	
question	b. False	
	Clear my choice	
4	In order to measure the effective diameter of the external thread using a bench micrometer, it is required to measure the major diameter.	ne
	and the minor diameter of the thread.	
out of	Select one:	
uestion	a. True	
	b. False	
	Clear my choice	
5	The strain gauge resistance varies with:	
at of	Select one:	

ot yet oswered larked out of

Flag question

A bench micrometer was used to measure the major diameter of an external thread, given that the diameter of the standard cylinder is 20.0000 mm. the micrometer reading over the standard cylinder was 20.9344, the micrometer reading over the thread was 21.1342 mm, then the major diameter of the thread is equal to ------

- a. 19.8002 mm
- 6. 20.1998 mm
- © c. 22.0686 mm
- O d. None of the above is correct

on **6** et ered

ag question

ed out of

The prominent part of a thread, whether internal or external is called -----

- a. The major diameter
- b. The crest of the thread
- c. The root of the thread
- d. The minor diameter
 - Clear my choice

The pitch diameter of the thread is another name for the effective diameter

Select one:

O a. True

O b. False

Using the following set of gauge blocks, list the minimum number of blocks to produce an Question 3: (4 points) overall dimension of 100.995 mm. (show your calculations)

Aetric (103) pieces	The second secon
Alettic (100 / Five	Increment
1 piece (1.005) mm	0.01
10 -toons (1.01 to 1.49) mm	0.5
49 pieces (0.5 to 24.5) mm 4 pieces (25-100) mm	25

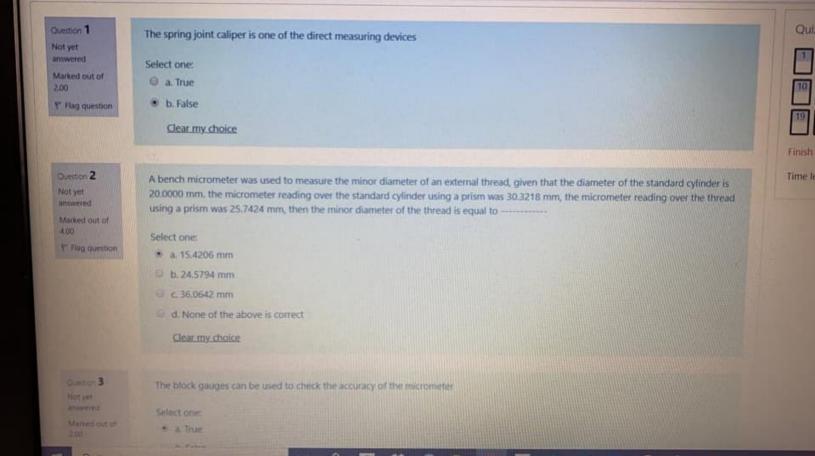
B. Why do we always choose the minimum number of blocks combinaton?

because accuracy Reading

end standard measuments & calibration

Colominitar ids device using for angular measurment van Question 4: (6 points) Describe the working principle of the clinometer Pace aligned hav each other put the colominar on Pace check the reading of Bubble equal zero if not you have more know and reversal and ill the Bubble gives zero reading colominator consist of two Scale main scale in degree Nemier Scale The reading in second by reverse work pices after that add all reser to set the movement of all alligned measure angle

to be help to the second 14 years Charles 2 A market transmission to complete using the particular and a softened, the respirate are discuss to the following takes, if you maged of my promone in angle observed corresponds to a first of \$100 account to the first and of the reflector science by its real state. A. Community profile greats of the married politics in the initial position (E. SEE, C. positio). (3) W. Calculus the represents distance of the profits from the straight line using the end profits SHAWARD IN STREET Adjustment L. Minc of Duffarient Constetles ANDRESSMEN terminal. teres first **SALE SPINET** other our Staff resiling 20 men MARKET -THE 190 E-50 40 50-100 38 100-150 32 150-280 20 S (25) 467 ш 209-250 28 235-300 48. 36 45 65 P. 380-350 44 555-400 36 45 15 100 м 250 4015-45m #45.55W 26 Population NAME AND ADDRESS OF .



In order to measure the effective diameter of the external thread using a bench micrometer, it is required to 21 measure the major diameter and the minor diameter of the thread. Select one: a True

Ol mr 7

Question 10

Not yet answered

Marked out of 2.00

F Flag question

if the smallest division of the main scale of the vernier caliper is 1 mm, and its vernier scale is divided into 10 divisions, then the accuracy of the device is

Select one:

- O a. 0.01 mm
- b. 0.1 mm
- O c. 0.05 mm
- O d. 1 mm

Clear my choice

Question 11

Not yet answered

Marked out of 2.00

P Flag question

The accuracy of the vernier bevel protractor is

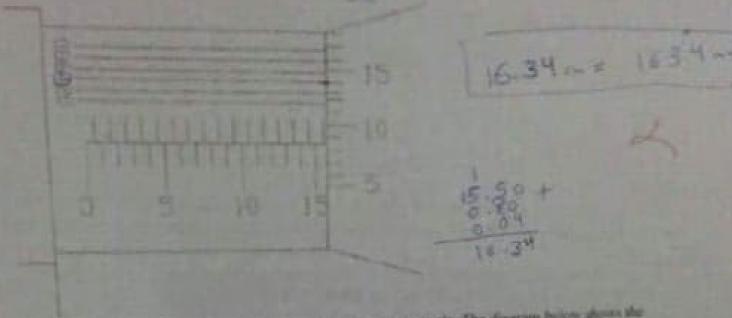
Select one:

- O a. 1 min
- O b. 2.5 min
- @ c. 5 min
- O d. 1 degree

Clear my choice

A student used a vernier misson ever to measure a certain dimension. The diagram shows as unto general of the micrometer scales. What reading was recorded?

Note: the dimensions on the sleeve are in men.



A student sised a vector bevel protractor to measure a certain augin. The diagram below above the sunding of the angle. What reading was recorded?



METROLOGY & ENG. MEASURIVIENTS

Dashboard / My courses / 0936442102974 / General / Final exam

Question 1

Marked out of

The prominent part of a thread, whether internal or external is called ------

Select one:

- a The major diameter
- b. The crest of the thread
- C The root of the thread
- d. The minor diameter

Clear my choice

Dieter 2

Clear my choice

Question 19

Not yet answered

Marked out of 2.00

P Flag question

We can use to measure wires, spheres, shafts, and blocks.

Select one:

- a. External micrometer
- b. Internal micrometer
- c. Depth micrometer
- d. Gauge blocks
- e. None of the above is correct

Clear my choice

Question 20

Not yet answered

Marked out of

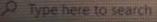
Both the vernier caliper and the inside micrometer can be used to measure the depth of a specimen.

Select one:

- a. True
- b. False

Clear my choice





















-	me - not whole	to of the light for the same of the same o	trement to promote the first on the second of the second o	
	Il Describe do mobile principi Chimater in Indian	The contract of the contract o	to the many of the same of the	10-
	C. Direction innovement monocontrol	pings to the Assect Francisco Francisco Francisco	lain. (4 parents)	
200	A. Compile Silicolog or of po- descript (193) power 1 power (193) power 2 power (194) pow 47 power (194) pow 4 power (25 bidy may	8,81 12,500 - 12,500	The same of the sa	
	116 19 1-		2	

The accuracy of the vernier bevel protractor is

Select one:

of

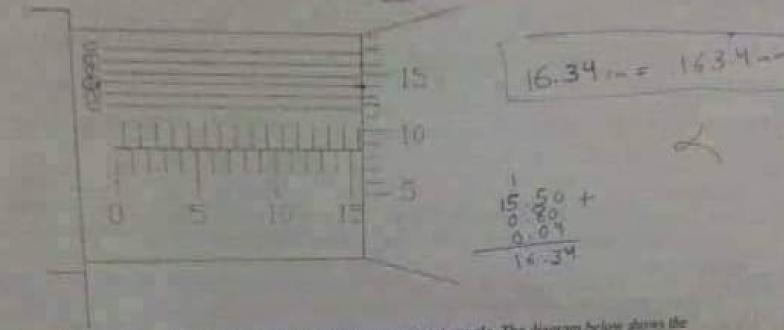
stion

- a. 1 min
- 6 b. 2.5 min
- E. 5 min
- d. 1 degree

Which of the following is not an angular measuring device / instrument

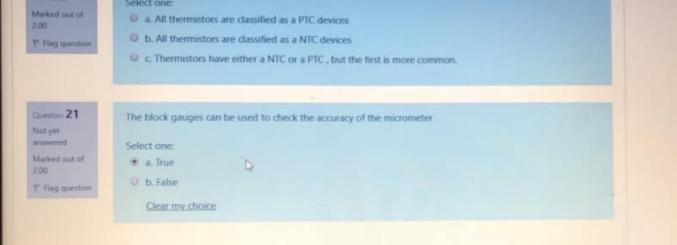
- a. Vernier bevel protractor
- b. Sine bar
 - c. Clinometer

A student used a vernier micrometer to measure a certain dimension. The diagram shows an enlargement of the micrometer scales. What reading was recorded? Note: the dimensions on the sleeve are in mm.



B. A student used a vernier bevel protractor to measure a certain angle. The diagram below shows the reading of the angle. What reading was recorded?





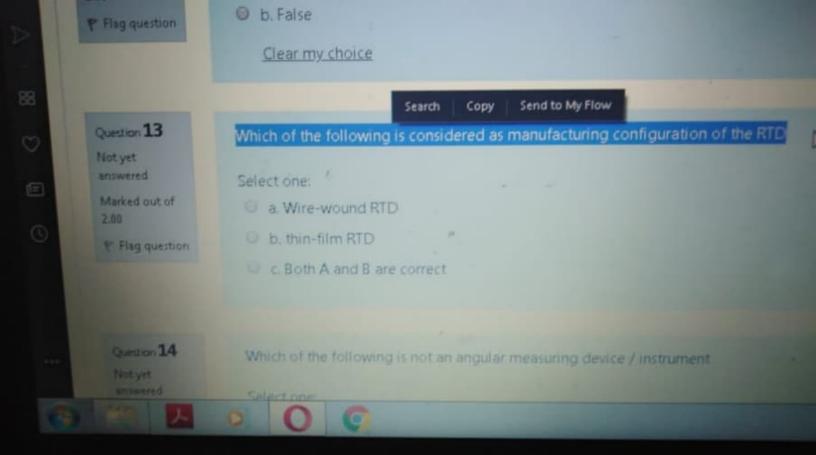
Student name:	
	Student number:
Question 1: (8 points)	section ———

Question 1: (8 points)

A surface was tested for straightness using an autocollimator and reflector; the readings are shown in the following table, if one second of arc increase in angle observed corresponds to a rise of 0.5 micron of the front end of the reflector relative to its rear end.

- Construct a profile graph of the surface relative to the initial points (0-100 mm).
- 2. Using the end points method to calculate the max deviation of the profile from the straight line. (3 points)

	position	Autocollimat or reading	Difference from first reading	Rise or fall over 100 mm	Cumulative rise or fall	Adjustment required	error
	mm	Sec	Sec	micrometer	Micrometer		
	0						
	0 -100	30					
	100-200	38					-
	200-300	70					
	300-400	86	100				-
1	400-500	94					-
	500-600	54	1				1
1	500-700	38	-				+
7	00-800	62					+
80	0-900	70					-
00	-1000	78					-



- a. Heating
- b. Cooling
- c. Bending
- d. Both A and B are correct

Clear my choice

The spring joint caliper is one of the direct measuring devices

Select one:

- a. True
- b. False

Clear my choice

6

A bench micrometer was used to measure the major diameter of an extending the standard cylinder is 20.0000 mm, the micrometer reading over the standard micrometer reading over the thread was 21.1342 mm, then the major diameter reading over the thread was 21.1342 mm, then the major diameter reading over the thread was 21.1342 mm.

Selectione

es Dicci	
	The root of the thread.
	@ d. The minor diameter
	Clear my choice
10	Which of the following is considered as manufacturing confi
	Select one:
at of	a. Wire-wound RTD
estion	D, thin-film RTD
	C. Both A and B are correct
11	The firm inint callmare are asset to 1
who harn	The firm joint calipers are examples of
	113 - 3 (- 2) 1 - 3 (- 2)

5:55 PM

h are above + area below = [17-54 +17.21] + 100 + 1000 + 100000 who = 0.2178 Jm

* 17.31 cm

Zain JO 4G

@ \$ 20% I

8

d out of

question

if the smallest division of the main scale of the vernier caliper is 1 mm, and its vernier scale is divided into 10 divisions, then the accuracy of the device is

Select one:

- a. 0.01 mm
- b. 0.1 mm
- O c. 0.05 mm
- 0 d.1 mm

Clear my choice

Question 2:

450-500

	TOTAL STREET,	DATE OF THE PARTY
	I should using for	angue measurment a trans
	Trans out when	put the consuster on
	charle the rending	of Bulbbles equal servers
	to the Manual	thinks set time latered him a
5.46 \$670	revelop clionweter	corner of two fine main
sale in	agree , cereter	scale in winter sen can
Question 3:	the residing in seco	med to severe work piece maled tall resulting to set

the following table, if one account of arc instrume in angle objected corresponds to a me of 0.25 micros of of white she from end of the reflector relative to its rear end - zient

A. Construct a profile graph of the surface relative to the initial points (0, 50). (4 points) B. Calculate the maximum deviation of the profile from the velocite line using the least square mexhod (10 points)

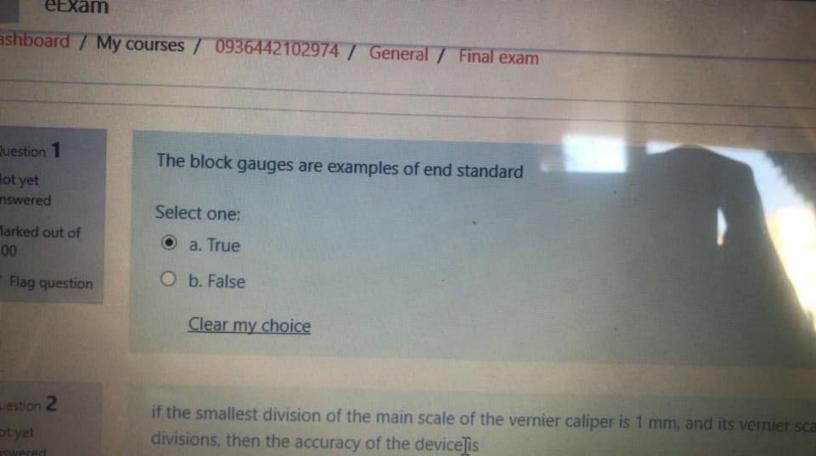
				ACCUMENT							
	Position.	Astrocollonator reading	Difference from first reading	Rise of fall over	Commissive rise or fall	infarm wat	3	X= (X-72)	-E-E	XmX	715
	Max	Nex	101	MILTON	PRODUCE						(8
	0	, 9	0	0	0			-75D	25.7	925	-4.23
	050	(m hr 22	0	0	2	1	11			745	
	50-100	20		195	46.5		1.5	1-15D		430 T	
	100-150	18	-14		-305		1.5	- 100	-52	520	-292
	150-200	12		-2.5	-4-		0	-50	-9.7	-25	-3 33
	200-250	16	-6	21.6	-55	5	- 21/2	0	-47	0	4-52
	250-300	26				6	1-5	50	29/3	-400	-5:13
9	300-350	24				12		100	-2	3 -320	-4-33
8	150-400	20		-4.5			3.5	150		11230	
	400-450	12	- 6	15 845	- 1		1-2	2.00	-1157	2 - 224	5 -62
										THE RESERVE AND ADDRESS.	

- 47FS J=-0.017 X+1148 225000

of wat

The spring joint caliper is one of the direct measuring devices

- a. True
- b. False



Question 3

Not yet answered

Marked out of 2.00

P Flag question

The external micrometer is one of the indirect measuring instruments

Select one:

- a. True
- b. False

Question 4

Not yet answered

Marked out of 2.00

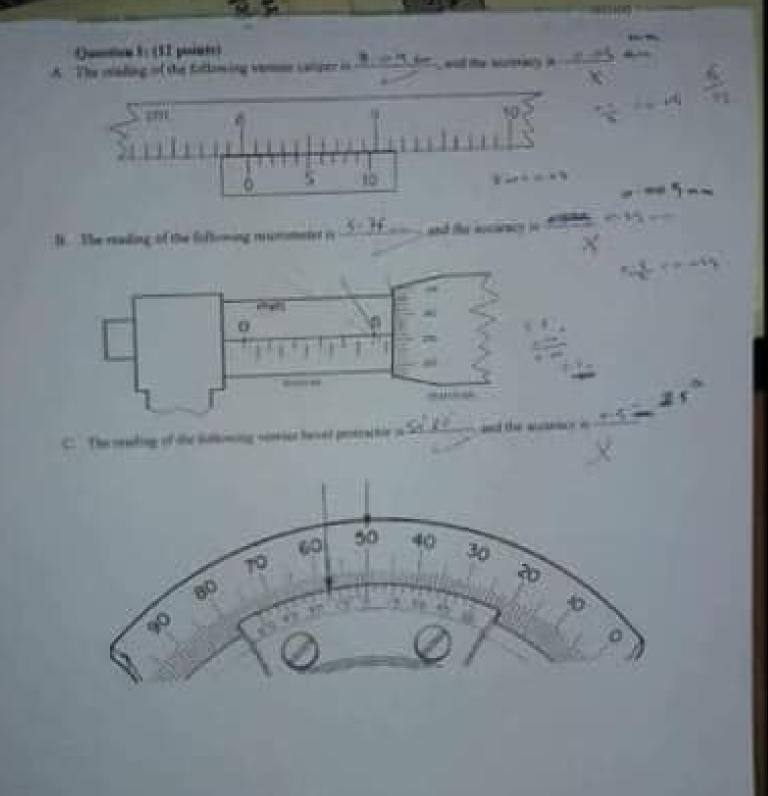
P Flag question

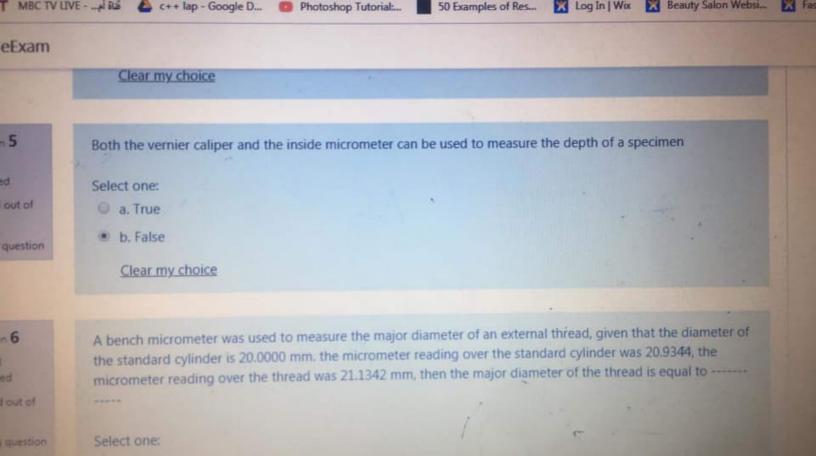
We can use ———— to measure wires, spheres, shafts, and blocks.

- a. External micrometer
- to to to a construction of the construction

Clear my choice Which of the following is considered as manufacturing configuration of the RTD Select one: a. Wire-wound RTD b. thin-film RTD c, Both A and B are correct Clear my choice

question





The external micrometer is one of the indirect measuring instruments

- a. True
- O b. False

Emitted bern and the reflected bern because the Auto collumeter uses light to measure couples in it never comes into combet with the test surface.

العال المايع: - ١٦ علامة

- study the profile in the figure then answer the following questions:
- a. Find the center line
- b. Calculate the surface vaghness using:
- 1 Maximum peak to Whey height method
- 2. ten points height method
- 3. Root mean square method

and the vertical magnification is equal to 500000.

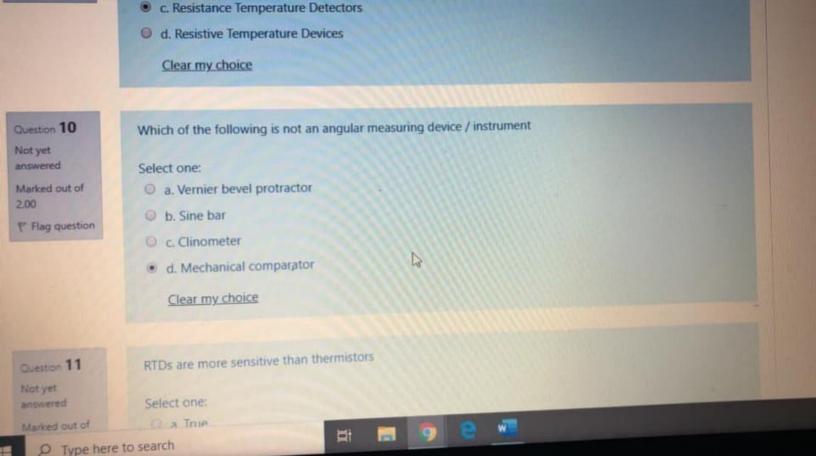
نفين الحسمة إلى المدتوعا باللاب بتكون عوجودة بالسؤلا



We can use ----- to measure wires, spheres, shafts, and blocks.

- a. External micrometer
- b. Internal micrometer
- c. Depth micrometer
- d. Gauge blocks
- e. None of the above is correct

/	9. In the RTD experiment, the relationship between the Resistance and temperature is linear: 10. Thermi stors are	
	B. False	
	10 The Resistance and temperature is linear	
	A. Less sensitive than RTDs B. More sensitive than RTDs	
	11. With all	
	A. True	
	A. True B. False	
	12. RTDs t vnicett.	
	I2. RTDs t ypically have much higher nominal resistance values than thermistors. B. False	
	B. False	
	13,	
	A. Form B. Lav	
	C. Profile D. Center line	
	Senter line	
1	14. The inside micrometer is one of the indirect measuring instruments	
- 4	A. True	
	B. False	
	Question 2:	
	Define the following Terminology from the Surface Texture Experiment.	9 Points
A	Roughness	
B.	Waviness	
C.	Lay	
D. 1	Profile	
E. C	enter line	
F. For	rm	



Final exam Measurement lab (0906442)

Eng. Lamees Al-Durgham may, 8,2018

Student name: --Section :---Student no: Question I: Select the best answer for each of the following paragraph: 15 Points

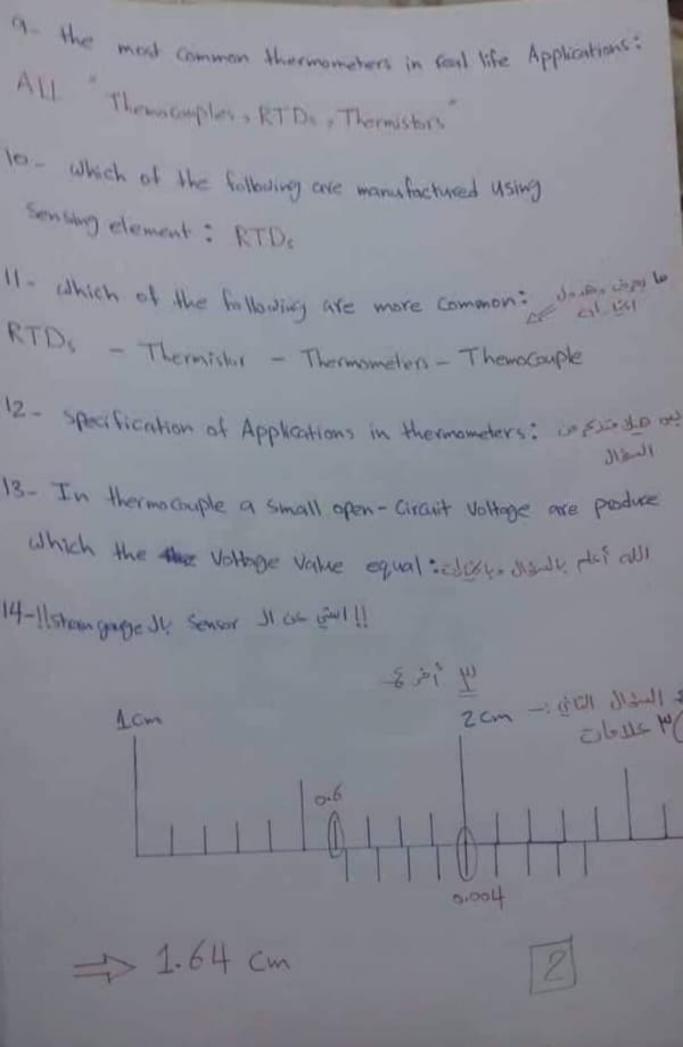
- What device is similar to an RTD but has a negative temperature coefficient?
- A. Strain gauge
- B. Thermistor
- C. Negative-type RTD
- D. Thermocouple
- 2. Temperature sensing can be achieved by the use of
- A. Thermocouples
- B. RTDs
- C. Thermistors
- D. All of the above
- 3. The output voltage of a typical thermocouple is
- A. less than 100 mV
- B. greater than 1 V
- C. Thermocouples vary resistance, not voltage
- D. None of the above
- 4. The connections to a thermocouple:
- A. can produce an unwanted thermocouple effect, which must be compensated for
- B. produce an extra desirable thermocouple effect
- C. must be protected, since high voltages are present
- D. both B and C are correct
- 5. The purpose of compensation for a thermocouple is:
- A. to cancel unwanted voltage output of a thermocouple
- B. to decrease temperature sensitivity
- C. to increase voltage output
- D. used for high-temperature circuits
- The strain gauge resistance varies with:
- A. Vibration
- B. Heat
- Weight
- D. Bending
- RTD stands for
- A. Relative Thermal Devices
- B. Radioactive Thermonuclear Dipoles
- C. Resistance Temperature Detectors
- Resistive Temperature Devices
- The decrease of resistance with the temperature increase is a property of:
- Thermocouple
- bimetallic thermometer
- C. Thermistor
- D. RTD

RTD stands for

Select one:

- a. Relative Thermal Devices
- b. Radioactive Thermonuclear Dipoles
- c. Resistance Temperature Detectors
- d. Resistive Temperature Devices

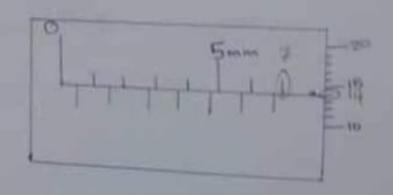
Clear my choice



Select one

- a. 15.4206 mm
- * p. 24.5794 mm
- 2 36:0642 mm
- a home of the above is comed

Clear the choice



=> 7.14 mm

STE (A)

What size is the gauge block build-up used with a lo inches sine bar to set the work piece at an angle of 4°30°? Show your calculations

المؤالة التالت - تعلاماق

Describe the working principle of the Auto Collimator? The Auto Collimator is an optical device (seed to mersure small angles with very high sensitivity. The Auto Collimator projects abeam of collimated light. An external reflector reflects all or part of the beam back into the instrument where the beam is facised and detected by aphotodetector.

The Auto-Collimator measures the devication between the

The strain gauge resistance varies with:

Select one:

- O a. Heating
- O b. Cooling
- o c. Bending
- O d. Both A and B are correct

Clear my choice

RTDs are more sensitive than thermistors

- O a. True
- b. False

A bench micrometer was used to measure the major diameter of an external thread, given that the diameter of the standard cylinder is 20.0000 mm. the micrometer reading over the standard cylinder was 20.9344, the micrometer reading over the thread was 21.1342 mm, then the major diameter of the thread is equal to
19.8002
20.1998
22.0686
None
A bench micrometer was used to measure the minor diameter of an external thread, given that the diameter of the standard cylinder is 20.0000 mm. the micrometer reading over the standard cylinder using a prism was 30.3218 mm, the micrometer reading over the thread using a prism was 25.7424 mm, then the minor diameter of the thread is equal to
<mark>15.4206</mark>
24.5794
36.0642
None
Which of the following is considered as manufacturing configuration of the RTD
Wire-wound RTD
Thin-film RTD
Both are correct
The spring joint caliper is one of the direct measuring devices
True
False Talse
In order to measure the effective diameter of the external thread using a bench micrometer, it is required to measure the major diameter and the minor diameter of the thread.
True
False Page 1997

RTD stands for
Relative thermal devices
Radioactive thermonuclear dipoles
Resistance temperature detectors
Resistive temperature devices
We can use to measure wires, spheres, shafts, and blocks.
External micrometer
Internal micrometer
Depth micrometer
Gauge blocks
None
If the smallest division of the main scale of the vernier caliper is 1 mm , and its vernier scale is divided into 10 divisions , then the accuracy of the device is
0.01 mm
0.1 mm
0.05 mm
1 mm
Which of the following is not an angular measuring device / instrument
Vernier bevel protractor
Sine bar
Clinometer
Mechanical comparator

The external micrometer is one of the indirect measuring instruments

True
False Palse
The accuracy of the vernier bevel protractor is
1 min
2.5 min
<mark>5 min</mark>
1 degree
The prominent part of the thread, whether internal or external is called
The major diameter
The crest of the thread
The root of the thread
The minor diameter
The bottom of the groove between the two flanking surfaces of the thread whether internal or external
The major diameter
The crest of the thread
The root of the thread
The minor diameter
RTDs are more sensitive than thermistors
True
False The Control of
The strain gauge resistance varies with:
Heating
Cooling
Bending

A and b
The firm joint calipers are examples of
Direct measuring devices
Indirect measuring devices
Line standard measuring devices
none
both the vernier caliper and the inside micrometer can be used to measure the depth of a specimer
True
False False
i disc
The block gauges can be used to check the accuracy of the micrometer
True
False
All thermistors are classified as a PTC device
All thermistors are classified as a NTC device
Thermistors have either a NTC or a PTC, but the first is more common.
The block gauges are examples of end standard
<mark>True</mark>
False
The pitch diameter of the thread is another name for the effective diameter
<mark>True</mark>
False