



BHARTIYA SKILL DEVELOPMENT UNIVERSITY

Registration no.-

School of Metal Construction Skills 1st Semester, 1ST In-Sem. Examination

B. Voc. Program, Summer Semester (2019-20)

Course Code: MCS1101

Time: 1 Hour

Course Name: Handskills and fitting

Max. Marks: 20

Instructions:

1. Attempt all questions.
2. Use of Calculators is prohibited.
3. Section A contains 05 Questions. Each question carries 1 Marks.
4. Section B contains 03 Questions. Each question carries 2 Marks.
5. Section C contains 03 Questions. Each question carries 3 Marks.

Section- A

01X5= 5 Marks

Q1. Which part does not belong to a file?

- | | |
|-----------|----------|
| (A) Tang | (C) Bow |
| (B) Blade | (D) Heel |

Q2. What it sawn with large tooth spacing's?

- | | |
|----------------|---------------------|
| (A) Aluminum | (C) Stainless steel |
| (B) Mild steel | (D) Cast iron |

Q3. Which material do you file with a single cut file?

- | | |
|----------------|---------------------|
| (A) Mild steel | (C) Stainless steel |
| (B) Tool steel | (D) Tin |

Q4. Which file type is not available?

- | | |
|----------------------------|---------------------------|
| (A) Type E half round file | (C) Type D round file |
| (B) Type H oval file | (D) Type A flat hand file |

Q5. Which tool is not a marking or scribing tool?

- | | |
|----------------|---------------------|
| (A) Try square | (C) Punch |
| (B) Divider | (D) Vernier Caliper |

Section – B

03×02 = 06 Marks

Q6. Why do you scribe Aluminum with a Pencil or a felt tip pen?

Q7. Why do you make a file notch?

Q8. How to prevent jamming of the saw blade?





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Registration no.-

Section – C

03×03 = 09 Marks

Q9. Explain the terms scribing

Q10. Explain how you should clean a file property

Q11. What are the safety rules in sawing?

Vetter
Rishika
19.05.2015



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Sample Question Paper

School of Metal Construction Skills

Answer key

B. Voc. Program, 1st SEM

Course Code: MCS 1101

Time: 1 Hour

Course Name: SMCS Handskill and Fitting

Max. Marks: 20

Section – A

05×01 = 05 Marks

Q1. Which part does not belong to a file?

- (A) Tang (C) Bow
(B) Blade (D) Heel

Q2. What it sawn with large tooth spacings?

- (A) Aluminium (C) Stainless steel
(B) Mild steel (D) Cast iron

Q3. Which material do you file with a single cut file?

- (A) Mild steel (C) Stainless stelle
(B) Tool steel (D) Tin

Q4. Which file type is not available

- (A) Type E half round file (C) Type D round file
(B) Type H oval file (D) Typ Ae flat hand file

Q5. Which tool is not a marking or scribing toole

- (A) Try square (C) Punch
(B) Divider (D) Vernier Calliper

Section – B

03×02 = 06 Marks

Q6. Why do you scribe Aluminium with a Pencil or a felt tip pen?

When marking with a "hard" steel needle, fine cracks may appear in the soft material. The material can break during further processing

Q7. Why do you make a file notch?

Notching avoid the saw slipping away to the side. Notching makes it easier to positioning the saw blade.

Q8. How to prevent jamming of the saw blade?

Using a waved or crossed saw blade. Tight the saw blade firmly

Section – C

03×03 = 09 Marks

Q9. Explain the terms scribing

Scribing is the transfer of shapes and dimensions from drawings to the workpiece to be processed. Shapes and dimensions can also be transferred using templates or based on specifications.

Q10. Explain how you should clean a file properly

Use a file brush to clean the file.

Traces of chips left behind which cannot be removed with a file brush are removed with a file cleaner (brass or copper sheet) working in the direction of the overcut.

Q11. What are the safety rules in sawing?

Wearing safety glasses (when using machines)

Short and safe clamping of workpieces

Clamp saw blade tight and straight

Do not use finger as guide when sawing

Do not blow away sawdust



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Registration no.-

School of Metal Construction Skills

1st Semester, 1ST In-Sem. Examination

B. Voc. Program, Summer Semester (2019-20)

Course Code: MCS1102

Time: 1 Hour

Course Name: Measuring

Max. Marks: 20

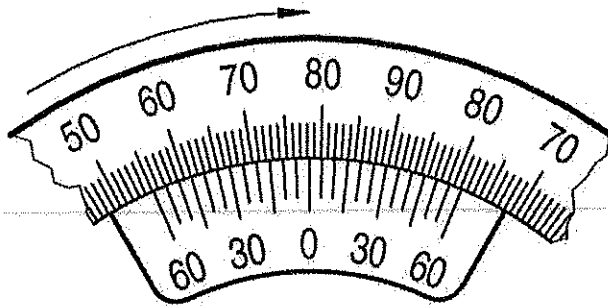
Instructions:

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5. Section C contains 03 Questions. Each question carries 3 Marks.

Section- A

01X5= 5 Marks

Q1. Read the measurement

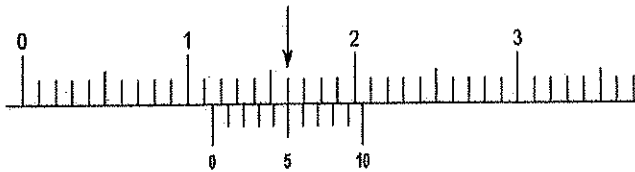


- | | |
|-----------------------|-----------------------|
| (A) 78 degree 15 min. | (C) 79 degree 15 min. |
| (B) 81 degree 15 min. | (D) 81 degree 40 min. |

Q2. With which tool can be measured 12.5 ± 0.3 ?

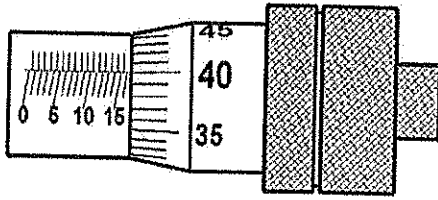
- | | |
|----------------------|------------------|
| (A) Steel ruler | (C) Tape measure |
| (B) Micrometer gauge | (D) Folding rule |

Q3. Which measurement can you read?



- | | |
|-------------|------------|
| (A) 11.9mm | (C) 11.5mm |
| (B) 11.04mm | (D) 12.5mm |

Q4. Which measurement can you read?



- (A) 15.0mm
(B) 16.9mm
(C) 16.40mm
(D) 17.4mm
- Q5. Which tool is a gauge?
- (A) Bevel angle
(B) Protractor
(C) Punch
(D) Vernier Caliper

Section – B

03×02 = 06 Marks

- Q6. Explain subjective and objective testing.
- Q7. Name 8 different measuring instruments/gauges.
- Q8. We measure a part. First measure = 12.5mm/ second measure = 12.6mm/
Third measure = 12.4mm. Which reasons could it have?

Section – C

03×03 = 09 Marks

- Q9. Make labelled diagram of Vernier calliper or micrometre.
- Q10. Write short note on measuring errors.
- Q11. What are the reasons that we measure parts?

Vetted
Richinbas



BHARTIYA SKILL DEVELOPMENT UNIVERSITY

Sample Question Paper School of Metal Construction Skills

Answer key

B. Voc. Program, 1st SEM

Course Code: MCS 1102

Time: 1 Hour

Course Name: SMCS Measuring

Max. Marks: 20

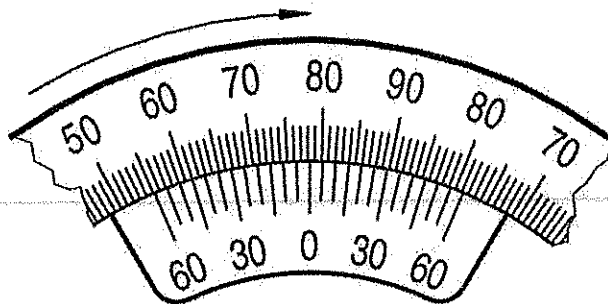
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Section- A

01X5= 5 Marks

Q1. Read the measurement

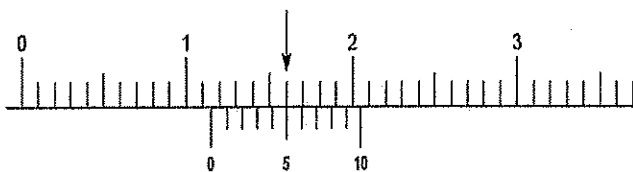


- (A) 78 degree 15 min. (C) 79 degree 15 min.
(B) 81 degree 15 min. (D) 81 degree 40 min.

Q2. With which tool can be measured 12.5 ± 0.3 ?

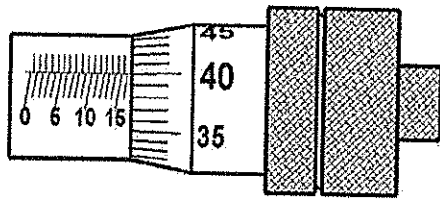
- (A) Steel ruler (C) Tape measure
(B) **Micrometer gauge** (D) Folding rule

Q3. Which measurement can you read?



- (A) 11.9mm (C) **11.5mm**
(B) 11.04mm (D) 12.5mm

Q4. Which measurement can you read?



- (A) 15.0mm
 - (B) 16.9mm
 - (C) 16.40mm
 - (D) 17.4mm
- Q5. Which tool is a gauge?
- (A) Bevel angle
 - (B) Protractor
 - (C) Punch
 - (D) Vernier Caliper

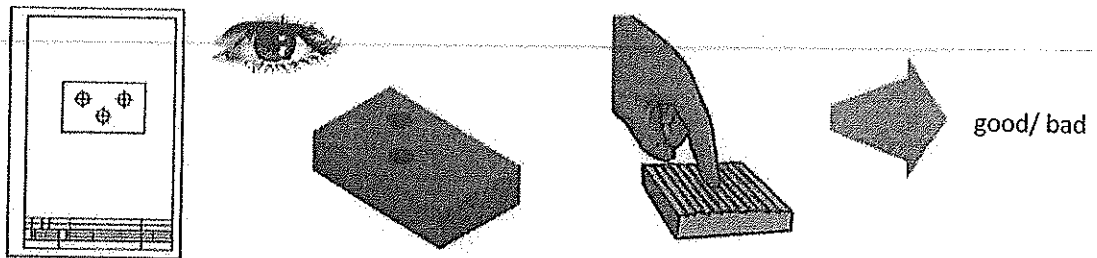
Section – B

03 × 02 = 06 Marks

Q6. Explain subjective and objective testing.

Ans. **Subjective testing**

Subjective test methods lead to conclusions which can vary greatly from one tester to the next.



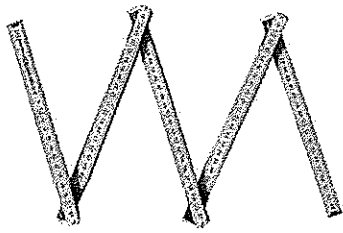
You can see, that at the work piece one rough
Hole is missing

you can feel, that the surface is too

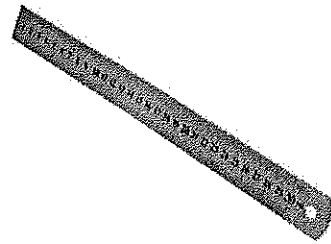
Objective testing

Objective test methods must produce results that always contain an measured value or a conclusion that is unequivocal. In other words, anyone carrying out the test using the same method must come to the same result.

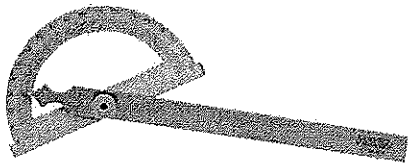
Q7. Name 8 different measuring instruments/gauges.
Ans.



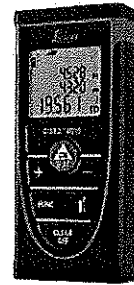
Folding rule



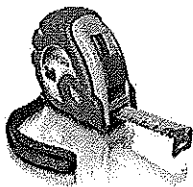
steel ruler



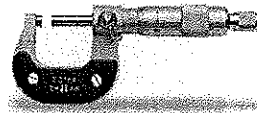
Protractor



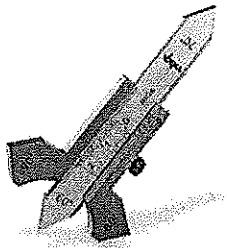
Laser measure



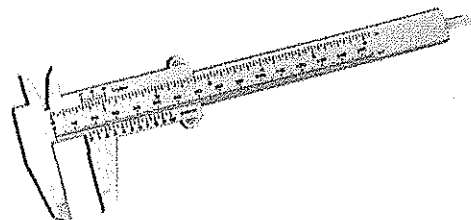
Tape measure



Micrometer gauge



Welding gauge



Vernier caliper

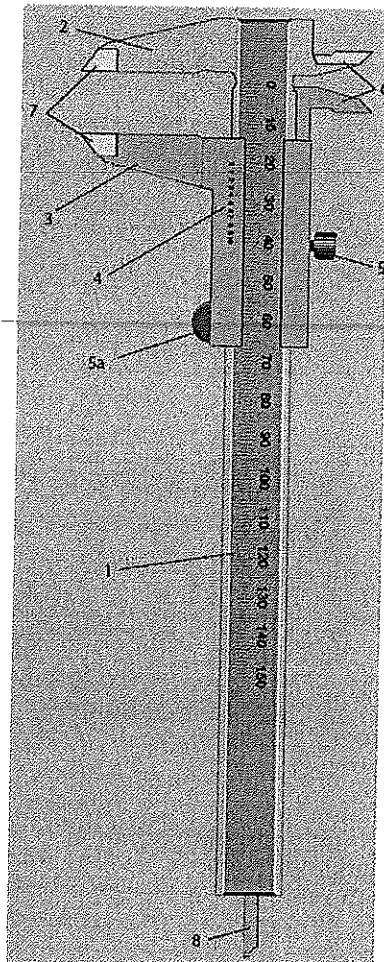
- Q8. We measure a part. First measure = 12.5mm/ second measure = 12.6mm/ third measure = 12.4mm. Which reasons could it have?
- Wrong measure tools
 - Different temperature
 - Look at the reading from above
 - Do not apply too much pressure when pressing the moving measuring jaw against the surface to be measured
 - The parallelism of the measuring jaw of the vernier gauge is checked using the light gap method.
 - Workpieces/measuring depths must be clean and burr-free for measuring
 - The measuring jaws must be directed as high as possible above the workpiece.
 - Do not tilt the vernier gauge during measuring.

Section – C

03×03 = 09 Marks

Q9. Make labelled diagram of Vernier calliper or micrometre.

Components of a Vernier Calliper



Measurements with an accuracy of 0.1 mm or up to 0.05 mm can be read off from a vernier gauge.

1. The bar with the line graduation in millimetres
2. The fixed measuring jaw
3. The adjustable measuring jaw
4. The slide with Vernier graduation
- 5a. The retaining screw (type 1A)
- 5b. The clamp (type 2A)
- 6 The cutting areas for measuring internal dimensions

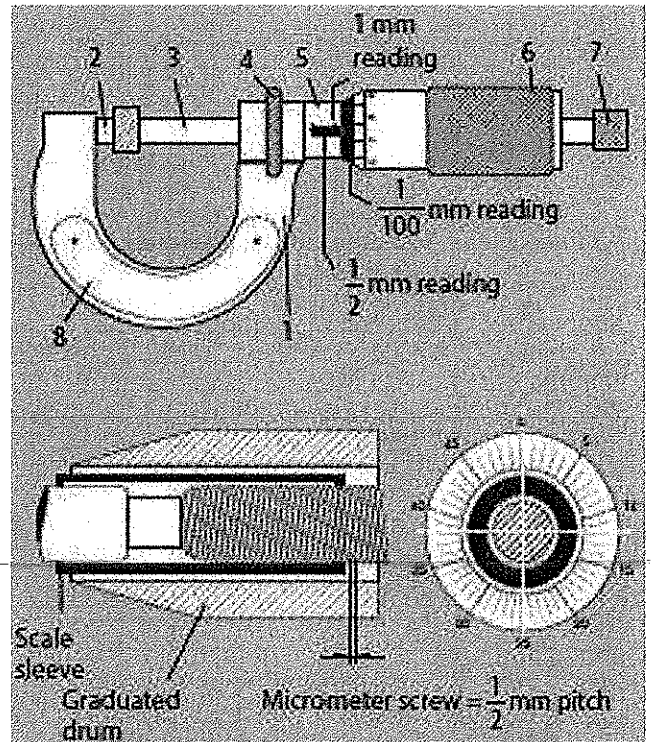
7. The measuring areas to measuring threads
8. The depth measuring rod for measuring drill depths, groove depths and ridge heights

OR

Components of a micrometre gauge

A micrometer gauge is used to measure external dimensions with a dimensional accuracy of 1/100 mm.

1. Bow (marked with measuring range)
2. Measuring pin (fixed end)
3. Micrometer screw
4. Retaining screw
5. Scale sleeve
6. Graduated drum (thimble)
7. Coupling (ratchet)
8. Plastic plates (thermal insulation marked with measuring range)



Q10. Should the temperature of a gauge be cooler or warmer than that of the Test piece? Reasons for your opinion.

Ans. The parallelism of the measuring jaw of the vernier gauge is checked using the light gap method.

The accuracy of the measuring tools is dependent upon the reference temperature (20°C).

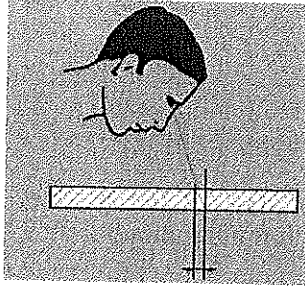
Workpieces/measuring depths must be clean and burr-free for measuring.

The measuring jaws must be directed as high as possible above the workpiece.

Do not tilt the vernier gauge during measuring.

Do not apply too much pressure when pressing the moving measuring jaw against the surface to be measured.

Look at the reading from above.



Q11. What are the reasons that we measure parts?

- Reproducibility of parts
- Early detection of errors
- Guarantee the function of parts
- Reduce costs
- Reduce waste
- Reduce process time
- Safety

Ketled
R. Thirubas