



BHARTIYA SKILL DEVELOPMENT UNIVERSITY

SET-B

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: Hand skills 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 instrument used for scribing?

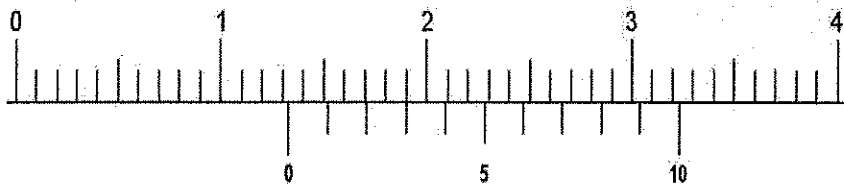
- (A) scriber (C) Vernier calliper
(B) marking gauge (D) centre punch

Q2. While using hacksaw which stroke is a cutting stroke?

- (A) upward (C) forward
(B) downward (D) backward

Q3. Which measurement can you read?

Tenth Vernier



- (A) 19.0mm (C) 133.0mm
(B) 13.3mm (D) 3.0mm

Q4. Which tool is most suitably used for scribing a circle?

- (A) divider (C) Vernier caliper
(B) scriber (D) pencil

Q5. Which type of file is used for making guide way for sawing?

- (A) Flat file (C) round file
(B) Semi round file (D) triangular file

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Section – B

03 × 02 = 06 Marks

Q6. Write 3 different types of scriber?

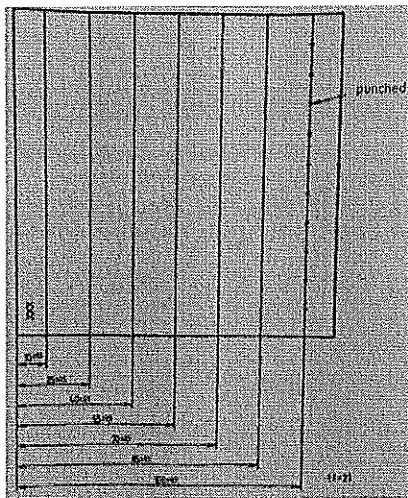
Q7. Write work plan for making a radius of 10mm on an aluminum workpiece

Q8. Explain the term counter bore and countersink.

Section – C

03 × 03 = 09 Marks

Q9. Write work plan for the following drawing



Q10. Why we use chalk on file.

Q11. Write short note on

- a) Least count b) Deburring c) Hinge

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School of Metal construction Skills
I in Semester, End Sem. Examination
B. Voc. Program, Summer Semester (2019-20)

Course Code: MCS1101

Time: 1 Hour

Course Name: Hand Skill 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 instrument used for scribing?

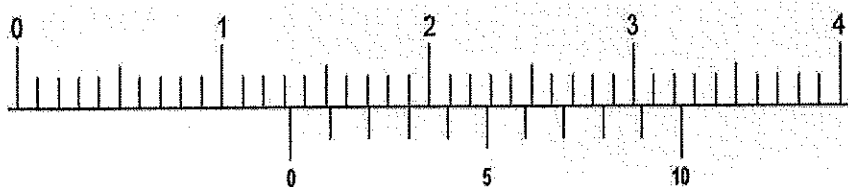
- | | |
|-------------------|----------------------|
| (A) scriber | (C) Vernier calliper |
| (B) marking gauge | (D) centre punch |

Q2. While using hacksaw which stroke is a cutting stroke?

- | | |
|--------------|--------------|
| (A) upward | (C) forward |
| (B) downward | (D) backward |

Q3. Which measurement can you read?

Tenth Vernier



- | | |
|------------|-------------|
| (A) 19.0mm | (C) 133.0mm |
| (B) 13.3mm | (D) 3.0mm |

Q4. Which tool is most suitably used for scribing a circle?

- | | |
|-------------|---------------------|
| (A) divider | (C) Vernier caliper |
| (B) scriber | (D) pencil |

Q5. Which type of file is used for making guide way for sawing?

- | | |
|---------------------|---------------------|
| (A) Flat file | (C) round file |
| (B) Semi round file | (D) triangular file |

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Section- B

02X3= 6 Marks

Q6. Write 3 different types of scriber?

- Ans. 1. Scriber- portable, can easily scribe any profile manually mostly used for straight lines.
 2. Caliper-Whose one end is fixed and can scribe from another end used for flat surfaces.
 3. Divider – used for circular scribing, we have to set the radius manually.

Q7. Write work plan for making a radius of 10mm on an aluminum workpiece

Ans. Radius

- Material checking
- Deburring
- Sizing
- Radius calculation (0.6r)- $0.6 \times 10 = 6\text{mm}$
- Scribing 10mm from both corners and 6mm for chamfer
- punching
- filing for chamfer
- dividing chamfers
- filing for radius in see saw motion
- checking by light gap method
- finishing

Q8. Explain the term counter bore and countersink.

Ans. Counter bore – it is a cylindrical flat bottom hole profile that enlarges the coaxial hole.

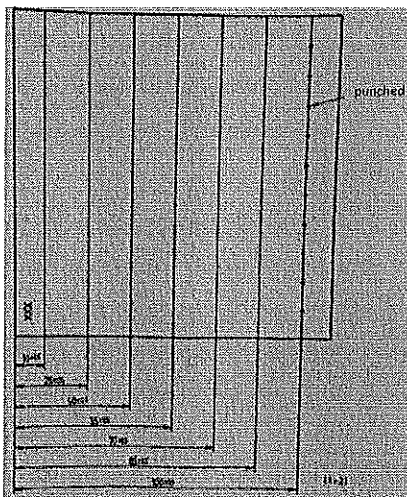
Tool used for counter bore is called counter boring tool. First we have to drill a suitable hole for that. Typically used when a fasteners like socket head cap screw is required to sit flush with or below level of workpiece.

Counter sink – it is a conical hole cut into a workpiece, used to provide support or seat for fasteners below the level of workpiece.

Section- C

03X3= 9 Marks

.Q9. Write work plan for the following drawing



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Ans. Work plan

- Material checking
- Deburring
- Sizing (measurement by measuring tool)
- Filing (file)
- Clamping
- Scribing (scriber)- scribing all lines with all dimensions
- Punching (centre punch)- on base plate
- Checking

Q10. Why we use chalk on file.

Ans. There are many reasons

- for lubrication
- to avoid fixing of chips in file
- sometimes to maintain temperature as well

Q11. Write short note on

- a) Least count b) Deburring c) Hinge

a) Least count – it is the smallest possible value measured by same instrument.

Can be calculate by the formula

Value of one main scale division

Least count = -----

Total no. of Vernier scale division

b) Deburring- removing small amount of metals from edges to make them smooth for safety with the help of files. Always use the process similar like chamfer.

c) Hinge – a movable joint or mechanism on which a door, gate or lid swings as it opens and closes or which connects linked objects.

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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:

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

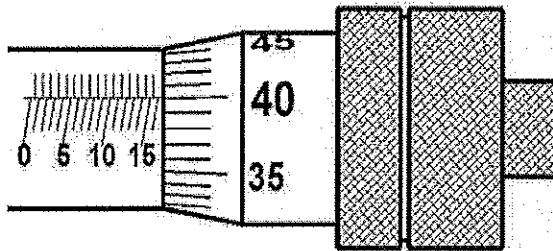
Q1. Which part does not belong to a Vernier caliper?

- | | |
|-------------------|-------------------------|
| (A) Measuring jaw | (C) Scale sleeve |
| (B) The clamp | (D) Depth measuring rod |

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

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

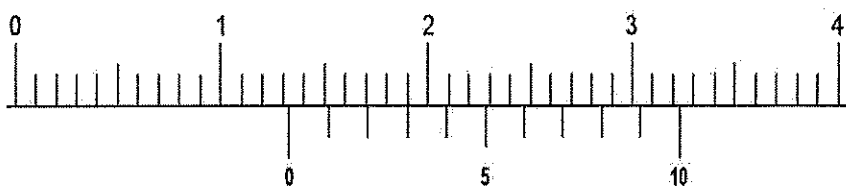
Q3. Which measurement can you read?



- | | |
|-------------|------------|
| (A) 16.9mm | (C) 1.64mm |
| (B) 16.04mm | (D) 16.4mm |

Q4. Which measurement can you read?

Tenth Vernier



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(A) 19.0mm

(C) 133.0mm

(B) 13.3mm

(D) 3.0mm

Q5. Which tool is a gauge?

(A) Bevel angle

(C) Punch

(B) Protractor

(D) Vernier Caliper

Section – B

03×02 = 06 Marks

Q6. What's the different between direct and indirect measuring?

Q7. For what do we use block 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. Explain the terms measuring and gauging

Q10. Should the temperature of a gauge be cooler or warmer than that of the

Test piece? Reasons for your opinion?

Q11. What are the reasons that we measure parts?

Vetted
Rishi Bora

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