



# SHRI VISHWAKARMA SKILL UNIVERSITY

(A State Skill University, setup by an Act of Legislature in 2016)

187026

**Course** : B.Voc. Tool and Die Manufacturing  
**Subject** : Workshop Technology  
**Subject Code** : CBME-101  
**Semester** : First  
**Duration** : 3 Hours  
**Maximum Marks** : 35

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## Instructions to the Students

1. This Question paper consists of two Sections. All sections are compulsory.
2. **Section A** comprises ten questions of objective type in nature. All questions are compulsory. Each question carries one mark.
3. **Section B** comprises eight essay type questions out of which students need to do any five. Each question carries five marks.
4. Read the questions carefully and write the answers in the answer sheets provided.
5. Do not write anything on the question paper.
6. Wherever necessary, the diagram drawn should be neat and properly labelled.

**Roll Number**

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SECTION -A (OBJECTIVE TYPE QUESTIONS)

(10x1=10 Marks)

For the following objective type questions, write your response (a), (b), (c) or (d). All questions carry equal marks.

1. The velocity of the tool relative to the work piece is the:  
(a) chip velocity (b) cutting velocity (c) shear velocity (d) feed
2. The number of elements in tool signature are:  
(a) 5 (b) 9 (c) 7 (d) 11
3. Which of the following is a lathe accessory:  
(a) head stock (b) compound rest (c) lathe carrier (d) tool post
4. Lathe centers are provided with a standard taper known as:  
(a) Morse taper (b) Jarno taper (c) Chapman taper (d) Seller's taper
5. The process of sizing and finishing a hole with very little metal removal is:  
(a) tapping (b) broaching (c) lapping (d) reaming
6. Enlarging an existing circular hole with a rotating single point tool is:  
(a) boring (b) drilling (c) internal turning (d) reaming
7. Which of the following process is used primarily to obtain surface finish:  
(a) hobbing (b) boring (c) honing (d) broaching
8. The part of a milling machine on which milling cutter is mounted is known as:  
(a) arbor (b) spindle (c) brace or bracket (d) tool post
9. Which of the following is not an angle measuring device:  
(a) bevel protector (b) sine bar (c) angle gauge block (d) angle iron
10. Surface plate is used to measure:  
(a) flatness (b) straightness (c) roundness (d) squareness

**SECTION -B (ESSAY TYPE QUESTIONS)**

**(5x5=25 Marks)**

1. (a) Define a machine tool. What are the general requirements of a machine tool?  
(b) What is the difference between orthogonal cutting and oblique cutting? Explain in brief.
2. (a) Briefly describe various parts of a lathe machine.  
(b) Discuss in brief various grinding machines with the help of neat sketches.
3. (a) What are the desirable characteristics of a cutting tool material? Explain in brief commonly used cutting tool materials.  
(b) Briefly explain plastic welding and fusion welding. Also discuss the role of welding in present manufacturing scenario.
4. (a) Give a brief classification of drilling machines. Also state the difference between a drilling machine and a boring machine.  
(b) Describe various parts of a boring machine. Also state the difference between vertical boring machine and horizontal boring machine.
5. (a) Classify a milling machine and give a brief description of its principal parts with the help of a neat sketch.  
(b) List the steps followed for designing Jigs and Fixtures. Also explain basic rules of location in brief.
6. (a) List and describe commonly used attachments on a Lathe machine.  
(b) What are common work holding devices used on milling machines. Explain.
7. (a) What are the safety precautions to be followed while working on a grinding machine? Explain in brief.  
(b) Discuss advantages and disadvantages of electric arc welding.
8. Write short note on any five:
  - (a) Primary and secondary manufacturing processes
  - (b) Function and types of cutting fluids
  - (c) MIG welding
  - (d) Various lathe operations
  - (e) Drilling machine operations
  - (f) Advantages of jigs and fixtures

-----End of Paper-----