



SHRI VISHWAKARMA SKILL UNIVERSITY

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

187024

Course : B.Voc. Robotics and Automation
Subject : Workshop Practice
Subject Code : DBME -103
Semester : First
Duration : 3 Hours
Maximum Marks : 35

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

--	--	--	--	--	--	--	--	--	--	--

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. Identify the single point cutting tool:
(a) milling cutter (b) hacksaw blade (c) grinding wheel (d) slotting tool
2. The strength of the tool essentially depends upon:
(a) lip angle (b) rake angle (c) cutting angle (d) relief angle
3. The last element in the tool signature is:
(a) lip angle (b) rake angle (c) nose radius (d) relief angle
4. The unit of lathe which houses the spindle and control levers for speed selection is:
(a) head stock (b) feed box (c) cross slide (d) carriage
5. Cutting action of the grinding wheel is improved by a process called:
(a) facing (b) dressing (c) clearing (d) truing
6. Removal of metal by feeding the work past a rotating multipoint cutter is known as:
(a) milling (b) broaching (c) grinding (d) burnishing
7. Twist drills are generally made of:
(a) mild steel (b) high speed steel (c) cast iron (d) ceramic
8. The included angle of the V-block is:
(a) 45° (b) 60° (c) 90° (d) 120°
9. Universal surface gauge is used for checking:
(a) straightness (b) flatness (c) parallelism (d) layout work and inspection
10. Which of the following operation does not require a jig:
(a) turning (b) drilling (c) reaming (d) tapping

SECTION -B (ESSAY TYPE QUESTIONS)

(5x5=25 Marks)

1. (a) What is a machine tool? Why these are required? List common machine tools used in a workshop.
(b) Define the various tool parts of a single point cutting tool with the help of a neat sketch. Also explain standard angles and working angles.
2. (a) What is the working principle of a lathe machine? Give a brief classification of lathe machines.
(b) What are the advantages of grinding over other cutting operations? Also describe various abrasives used in grinding wheels.
3. (a) What are various functions of a cutting fluid? Briefly classify cutting fluids used in various metal cutting operations.
(b) Give a brief comparison of arc welding and gas welding. Also list some of the equipments used for metal arc welding.
4. (a) Discuss various types of drills used in drilling machines.
(b) What is a reamer? Discuss various types of reamers commonly used in manufacturing industries.
5. (a) Give a brief description of salient features of vertical milling machine and universal milling machine.
(b) Explain the difference between a Jig and a Fixture. What are the different elements of Jigs and Fixtures?
6. (a) List precautions to be practiced while using milling cutters.
(b) Discuss advantages of using cutting fluids during machining.
7. (a) Name and describe three methods of turning tapers on a lathe machine.
(b) Discuss various types of grinding machines.
8. Write short note on any five:
 - (a) Tool signature of a single point cutting tool
 - (b) TIG welding
 - (c) Lathe machine attachments
 - (d) Selection of grinding wheel
 - (e) Up-milling and down-milling
 - (f) Types of chips in metal cutting

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