



SHRI VISHWAKARMA SKILL UNIVERSITY

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

187018

Course : B.Voc. Automotive Mechatronics
Subject : Manufacturing Technology
Subject Code : BBME-101
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 10 questions of objective type in nature. All questions are compulsory. Each question carries 1 mark.
3. **Section B** comprises 8 essay type questions out of which students need to do any 5. Each question carries 5 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)

1. The property of sand due to which gas and steam escapes from sand is
a) cohesiveness b) adhesiveness c) permeability d) Flowability
2. Which of the following is an example of fusion welding?
a) Arc welding b) Forge welding
c) Thermit welding with pressure d) Resistance welding
3. The cutting tool in a milling machine is mounted on
a) Spindle b) Arbor c) Column d) Knee
4. The taper provided to the pattern for its removal is known as
a) shaking allowance b) distortion allowance
c) machining allowance d) draft allowance
5. In which type of operation, motion of cutting tool is rotary as well as translating?
a) planing b) milling c) drilling d) turning
6. For large positive back rake angle, tool will be
a) Weaker b) Stronger c) Smoother d) Harder
7. Crater wear occurs at
a) Tool flank b) Tool shank c) Tool face d) None of the mentioned
8. What is the process, in which the metal is caused to flow through a restricted orifice to create an extremely elongated strip of uniform and comparatively smaller cross-sectional area, called?
a) Rolling b) Extrusion c) Drawing d) Spinning
9. Which cutting condition affects the cutting temperature predominantly?
a) depth of cut b) cutting speed
c) feed d) none of the above has any effect on cutting temperature
10. Which one among the following welding processes uses non-consumable electrode?
a) Gas metal arc welding b) Submerged arc welding
c) Gas tungsten arc welding d) Flux coated arc welding

SECTION -B (ESSAY TYPE QUESTIONS)

(5x5=25 Marks)

- 1 With the help of neat sketch, explain the sand casting process. 05
- 2 (a) What are the common allowances provided on patterns? Discuss any two pattern allowance along with diagrams 03
(b) Show the nomenclature of a single point cutting tool using orthographic projections. 02
- 3 (a) What do you understand by High Speed Steel tool? Discuss in brief the commonly used High Speed Steel used in industries, 02
(b) Explain the mechanisms of tool wear. Discuss the different types of tool wear. 03
- 4 (a) Discuss the process of Lapping. How it is different from honing operation? 02
(b) What is the function of cutting fluid? How cutting fluid effect the tool life? 03
- 5 (a) With the help of diagram, explain the process of forward extrusion. Explain how the hollow sections can be produced in this process. 04
(b) Discuss the principle of rolling operation. 01
- 6 (a) Distinguish clearly between shaping and planning. 02
(b) With the help of diagram, discuss the working principle of Milling Machine. What kind of operations can be performed on milling machine? 03
- 7 (a) Define hot working of metals. What are its advantages and disadvantages? 03
(b) Write short notes on the following
(i) Malleability, (ii) Brittleness, (iii) Hardness, , and (f) Toughness 02
- 8 (a) Discuss the principle of arc welding. With the help of neat sketch, explain the working of MIG welding, 03
(b) Discuss in brief the different types of electrodes used in welding 02

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