

B.Voc Automotive Component Manufacturing
Subject: Introduction to Press Tools, Dies and Moulds
Subject Code: LBME-207
Semester: Fourth
Session: - September 2022
Theory (External): 35 Marks
Time: 03 Hours

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 01 marks.
3. Section B comprises 8 essay type questions out of which students need to do any 5. Each question carries 05 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 labeled

Roll Number

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SECTION -A (SHORT/OBJECTIVE TYPE QUESTIONS)
(10x 1= 10 Marks)

- A. Classify the press tools.
- B. Show schematically the parts of a typical press tool.
- C. Enumerate the functions of a punch and die.
- D. How blanking is different than piercing? Show schematically.
- E. Differentiate between progressive and combined types of press tools.
- F. What is an embossing operation?
- G. Differentiate between curling and coining operations.
- H. Classify the dies.
- I. How a mould is different than a die?
- J. What is the shut height of a die?

SECTION -B (ESSAY TYPE QUESTIONS)
(5x5=25 Marks)

1. Explain cut-off and parting-off operations with sketches.

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2. Describe the different types of power presses used in press tool operations.
3. Calculate the bending force for a 45° bend in an aluminium blank. The following data is given:
Blank thickness= 2 mm; Bend length= 1000 mm; Die opening= 8 x metal thickness; Ultimate tensile strength= 455 N/mm²
4. State the functions of following press tool parts: (a) shank, (b) top plate, (c) guide bush, (d) bottom plate and (e) stripper plate
5. Write notes on:
(a) Bend allowance, (b) Set back
6. Enlist the various applications of a fine blanking operation.
7. What are the design considerations of forming and coining operations?
8. Calculate the blank diameter to make a steel shell having 100 mm outer diameter and 50 mm height with 3 mm thick sheet metal.

==END OF PAPER==