

## SECTION-D

**Note:** Long answer type questions. Attempt any two questions out of three questions. (2x8=16)

Q.23 Design and draw a simple piercing tool, highlighting the essential components and their functions.(CO3)

Q.24 Explain the concept of press tool operations in detail, Covering all non-cutting operations with examples.

(CO1)

Q.25 Design and draw a bending tool for a specific sheet metal component. Explain the design considerations and the expected outcome. (CO4)

No. of Printed Pages : 4

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**3<sup>rd</sup> Sem / Branch : Mechanical  
(Tool & Die Design)**

**Subject : Press Tool - Design and Drawing**

Time : 3 Hrs.

M.M. : 60

## SECTION-A

**Note:** Multiple choice questions. All questions are compulsory (6x1=6)

Q.1 Which press tool operation is used to create holes in a sheet metal component? (CO1)

- a) Blanking                      b) Piercing
- c) Trimming                    d) Notching

Q.2 Which element of a press tool is responsible for guiding the material during operation? (CO1)

- a) Punch plate                  b) Die set
- c) Guiding plate                d) Stripper plate

Q.3 What is the primary function of a stripper plate in a press tool? (CO3)

- a) Hold the punch in place
- b) Guide the material
- c) strip the part from the punch
- d) Align the die and punch

- Q.4 In which die cutting and non-cutting operations are performed per stroke? (CO3)
- a) Combination die      b) bending die  
c) Forming die          d) Progressive die
- Q.5 The press can be used for.
- a) Shearing                  b) Extruding  
c) Forging                  d) All of the above
- Q.6 Ram speed is calculated as.
- a) Meters/minutes      b) Rounds per minute  
c) Strokes per minute   d) None of the above

### SECTION-B

**Note:** Objective/ Completion type questions. All questions are compulsory. (6x1=6)

- Q.7 Name one non-cutting operation in press tool operations. (CO1)
- Q.8 Press are generally employed in \_\_\_\_\_ production of components. (CO2)
- Q.9 The land in a press tool provides support to the \_\_\_\_\_ during the cutting process. (CO3)
- Q.10 Cutting dies such as blanking and piercing tools are example of \_\_\_\_\_ operations. (CO4)
- Q.11 Progressive tools are primarily used for single-step operations in press tooling. (True/False) (CO4)
- Q.12 The ejection mechanism in a press tool is used for aligning the die and punch. (True/False) (CO4)

### SECTION-C

**Note:** Short answer type questions. Attempt any eight questions out of ten questions. (8x4=32)

- Q.13 Explain the working principle of a progressive tool. (CO3)
- Q.14 Describe the design parameters involved in press tool design for bending operations. (CO1)
- Q.15 Explain the terms-Blanking, trimming and notching. (CO1)
- Q.16 Illustrate the strip layout concept in press tool design. (CO2)
- Q.17 Compare hydraulic and pneumatic presses for press tool operations. (CO3)
- Q.18 Design a simple blanking tool, explaining the key components and their functions. (CO4)
- Q.19 Explain the BIS Standards for die sets such as top and bottom plate (CO3)
- Q.20 Describe the working of a hand press and its suitability for press tool operations. (CO3)
- Q.21 Compare progressive and compound press tools with advantages and limitations. (CO2)
- Q.22 Explain the concept of shear force and die life. (CO3)