

- Q.19 Explain angular clearance in detail with diagram.  
(CO11)
- Q.20 What is the Taylor's principle for designing limit gauge?  
(CO14)
- Q.21 Explain the concept of safety and maintenance for a die.  
(CO14)
- Q.22 Explain various material handling equipment.  
(CO6)

#### **SECTION-D**

- Note:** Long answer type questions. Attempt any two questions out of three questions.  $(2 \times 8 = 16)$
- Q.23 What do you understand by integrated operations of press tool? Also classify the integrated operations.  
(CO4)
- Q.24 Explain four stages of cutting sheet metal in detail with a neat sketch.  
(CO5)
- Q.25 Write short notes on  
 a) GO and NOT GO Gauges  
 b) 3-2-1 principles in jigs and fixture

**(Note :** Course outcome/CO is for office use only)

No. of Printed Pages : 4 222025  
Roll No. ....

**2nd Year / Advance Diploma in Tool & Die Making**  
**Subject:- Tool Design - I**  
**(Press Tool, Jigs and Fixtures)**

Time : 3Hrs. M.M. : 60

#### **SECTION-A**

**Note:** Multiple choice questions. All questions are compulsory  $(6 \times 1 = 6)$

- Q.1 Which die is used for more than one cutting operation per stroke?  
(CO3)  
 a) Blanking die      b) Piercing die  
 c) Compound die      d) Progressive die
- Q.2 What is the name of the operation for making hole in a work piece with the help of die?  
(CO5)  
 a) Trimming      b) Piercing  
 c) Drilling      d) Boring
- Q.3 What is the primary purpose of a strip layout in press tool design?  
(CO4)  
 a) To align the workpiece  
 b) To guide the material through the die  
 c) To reduce friction during operation  
 d) To control the press machine's speed

Q.4 In the 3-2-1 principle of fixture design, 2 refers to the number of (CO8)

- a) Clamps required
- b) Locators on the primary datum face
- c) Degrees of freedom of the workpiece
- d) Operations carried on the primary datum face

Q.5 A ring gauge is used to check (CO9)

- a) Diameter of holes
- b) Internal Diameter of holes
- c) Diameter of shafts
- d) None of the above

Q.6 The tolerance on 'Go' and 'No go' gauges is usually work tolerance. (CO8)

- a) 1%
- b) 10%
- c) 5%
- d) 20%

## SECTION-B

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

Q.7 Define Blanking cut-off. (CO2)

(2)

222025

Q.8 \_\_\_\_\_ is the component in press tools used to prevent the work piece from stitching to the punch. (CO4)

Q.9 Define interchangeability. (CO5)

Q.10 Define piercing. (CO2)

Q.11 Name any two cutting operations on press tool. (CO1)

Q.12 Write the full form of CAD. (CO15)

## SECTION-C

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

Q.13 What is the working principle of press? (CO3)

Q.14 Explain any four cutting operations on press tool. (CO5)

Q.15 Explain the principle of alignment and guidance for a press tool. (CO4)

Q.16 Explain combination die with neat diagram. (CO5)

Q.17 Define principle of grain direction for press tools. (CO7)

Q.18 Define the cutting forces in press tools. Give the formula for its calculation. (CO10)

(3)

222025