

- Q.26 Write a short note on strip layout.
- Q.27 What are the points to be considered while selecting press or press tool operations.
- Q.28 Explain grain direction with diagram.
- Q.29 Explain the working principle of presses.
- Q.30 Write a short note on scrap handling equipments.
- Q.31 Explain estimation of machine hours through process planning.
- Q.32 Give standard checklist for maintenance of press tools.
- Q.33 Write a short note on classification of tool material.
- Q.34 Explain various components of fixtures.
- Q.35 What are the design parameters and tolerances for plain gauges.

#### **SECTION-D**

- Note:** Long answer type questions. Attempt any two questions out of three questions.  $(2 \times 10 = 20)$
- Q.36 Enlist cutting operations which can be performed on Press Tool. Explain any two in detail with diagram.
- Q.37 What is stripping force? Explain important factors which affect stripping force.
- Q.38 Explain the construction of open jig and closed jig with diagram.

No. of Printed Pages : 4  
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**Advance Diploma in Tool and Die Making**  
**Subject:- Tool Design Theory - I**  
**(Press Tools, Jigs & Fixtures)**

Time : 3Hrs.

M.M. : 100

#### **SECTION-A**

**Note:** Multiple choice questions. All questions are compulsory  $(10 \times 1 = 10)$

- Q.1 Presses are generally employed in \_\_\_\_\_ production of \_\_\_\_\_ components.
- a) mass, identical      b) mass dissimilar
  - c) job, identical      d) job, dissimilar
- Q.2 Which die is used for more than one cutting operation per stroke?
- a) Blanking Die      b) Piercing Die
  - c) Compound Die      d) Progressive Die
- Q.3 Which of the following helps in obtaining correct alignment of the punch holder with die shoe
- a) guide posts      b) stops
  - c) pilot      d) none
- Q.4 Tool lifer is most effected by machine \_\_\_\_\_
- a) cutting speed
  - b) tool geometry
  - c) feed and depth
  - d) not using coolant and lubricant

- Q.5 Shearing the sheet into two or more pieces is known as  
a) perforating      b) parting  
c) notching      d) lancing
- Q.6 Which is the type of strip layout  
a) Straight layout      b) angular layout  
c) staggered layout      d) all of above
- Q.7 In piercing operations the clearance is provided on  
a) die      b) punch  
c) any other member      d) none of the above
- Q.8 A fixture does not  
a) Holds the workpiece b) Locate the workpiece  
c) Guide the tool      d) All of the above
- Q.9 Jigs are not used in  
a) Drilling      b) Reaming  
c) Tapping      d) Milling
- Q.10 Which of the following is not correct about plain gauges?  
a) Used to check threaded portions  
b) There is no scale in plain gauges  
c) Indicates actual value of the inspected dimension  
d) Can be used to check dimension of manufactured part

## SECTION-B

- Note:** Objective type questions. All questions are compulsory. (10x1=10)
- Q.11 Write use of sheet materials component.  
Q.12 Define clearance.  
Q.13 Name two non-cutting operations on press tool.  
Q.14 Name one of the operation of cutting of a flat sheet to the desired shape.  
Q.15 How the tool life can be increased?  
Q.16 Define shut height.  
Q.17 Name any two material handling equipments.  
Q.18 Write unit of machining time.  
Q.19 Define storage.  
Q.20 Write function of a fixture.

## SECTION-C

- Note:** Short answer type questions. Attempt any twelve questions out of fifteen questions. (12x5=60)
- Q.21 Explain concept of sheet material components and give their applications.  
Q.22 Explain principle of shearing operation.  
Q.23 Show the various parts of a press tool with diagram.  
Q.24 Explain combination dies.  
Q.25 Write the steps performed in non cutting dies.