

- Q.28 Enlist the properties of materials used for making dies.
- Q.29 Write a short note on bending operation.
- Q.30 Explain slug and strip lay out.
- Q.31 How the material utilization is calculated? Give formula also.
- Q.32 What is procedure for storage of a press tool? Explain.
- Q.33 Give the importance of work sheet and process sheet.
- Q.34 What are the main functions and features of jig and fixtures.
- Q.35 Explain the maximum and minimum material condition on Taylor's principle.

SECTION-D

Note: Long answer type questions. Attempt any two questions out of three questions. (2x10=20)

- Q.36 Explain any five non-cutting operations in detail with diagram.
- Q.37 What is stripping force? Explain important factors which affect stripping force.
- Q.38 Explain various components of jig and fixture assembly with diagram.

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**2nd Year / Branch : 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 (10x1=10)

- Q.1 Ram speed is calculated as
 a) Meter/minutes b) Rounds per minute
 c) Strokes per minute d) None of the above
- Q.2 Shearing the sheet into two or more pieces is known as?
 a) Perforating b) Parting
 c) Notching d) Lancing
- Q.3 The size of press is expressed in terms of
 a) Its stroke length
 b) The maximum force its ram can exert
 c) Die space
 d) Ram speed
- Q.4 In drawing operation , increase of die radius.....
 a) Has much influence on punch load and it decreases
 b) Does not influence the punch load much
 c) Punch load increases
 d) Punch load depends on other factors.

- Q.5 A thick plate fastened to the bed of the press which supports and holds the die assembly, is known as
 a) Supporting plate b) Rigid plate
 c) Holding plate d) Bolster plate
- Q.6 Which is the type of strip layout
 a) Straight layout b) Angular layout
 c) Staggered layout d) All of the above
- Q.7 The front rake required to machine brass by H.S.S. tool is.....
 a) $.15^\circ$ b) $.0^\circ$
 c) $.5^\circ$ d) $.10^\circ$
- Q.8 In which of the following operation Jigs are preferred over fixture?
 a) Grinding b) Turning
 c) Milling d) Drilling
- Q.9 The following helps in freezing the punch from the scarp in the return stroke?
 a) Knock out pins b) Punch plate
 c) Pilot d) Stripper
- 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 function of press tool.
 Q.12 Write material of press tool.
 Q.13 Describe integrated operation.
 Q.14 What is spring back?
 Q.15 How the tool life can be increased?
 Q.16 What is die cushion?
 Q.17 Write principle of gravity.
 Q.18 Write the formula for calculation of machining time.
 Q.19 Define batch production.
 Q.20 Define tolerance.

SECTION-C

- Note:** Short answer type questions. Attempt any twelve questions out of fifteen questions. (12x5=60)
- Q.21 Explain the main components of a press tool and give their functions.
 Q.22 What are main steps performed on press tool during cutting operations? Explain.
 Q.23 Explain the principle of alignment and guidance during a process on press tool.
 Q.24 Enlist the factors to be considered for the selection of a die.
 Q.25 What are non-cutting dies? Write their applications.
 Q.26 Explain land and shear angle for a die with diagram.
 Q.27 Define cutting force in press tools. Give the formula for its calculations.