

IV B.Tech I Semester Supplementary Examinations, April/May 2005
TOOL DESIGN
(Production Engineering)

Time: 3 hours

Max Marks: 80

Answer any FIVE Questions
All Questions carry equal marks

1. (a) Draw and explain the geometry of a single point cutting tool (3 views).
(b) What are chip breakers? Explain different types of chip breakers with neat sketches.
2. (a) Explain flat and circular type of form tools.
(b) Explain the classification and types of milling cutters.
3. (a) Explain about Die set elements in detail.
(b) Explain
 - i. Metal spinning
 - ii. Shear forming
 - iii. Centre of pressure.
4. (a) Explain
 - i. Magnetic and vacuum clamping.
 - ii. Equivalising and multiple clamping.
(b) Explain the principle of location applied to flat and cylindrical (internal and external) surfaces.
5. (a) Explain the following in the context of forging
 - i. Flashing
 - ii. Trimming.
(b) Explain with a suitable example the procedure for providing limits on Go and No-Go gauges.
6. (a)
 - i. Explain Taylor's Principle.
 - ii. Explain various types of basic fits.
 - iii. What is a hole and a shaft?
(b) Explain various economic analysis of Jigs and fixtures.
7. (a) Explain with neat sketches various methods of reducing punch load.
(b) Explain the geometry of a Reamer with a neat sketch.
8. (a) What are process parameters? Explain their influence in the selection of geometrical parameters of the cutting tool.

- (b) Explain the process of Grinding of Drills.
- (c) What is strip layout? Explain

★ ★ ★ ★ ★