

12. (a) Sketch and explain the turnover and latch jigs. (10 + 6)

Or

- (b) Explain the inspection and welding fixtures with neat sketches. (8 + 8)

13. (a) (i) List the various types of presses. (4)
(ii) With simple sketches, explain the various press accessories. (12)

Or

- (b) Design and draw the standard views of a progressive die meant for producing the components as shown in Fig. (i) from a 2mm thick sheet metal. (All dimensions are in mm). The ultimate shear strength of the material is 320N/mm^2 .

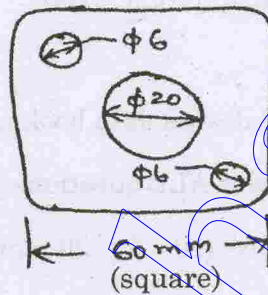


Fig. (i)

14. (a) (i) Sketch and explain any one of the ejectors used in die operations. (8)
(ii) Write detailed note on the variables affecting metal flow in drawing operations. (8)

Or

- (b) Design a combination die for the production of steel cups of inner diameter 50mm, height 75mm and thickness 1mm.

15. (a) (i) List the various concepts employed in mould and die design. (8)
(ii) Explain how an injection mould is designed. (8)

Or

- (b) (i) Discuss in detail about feed and ejection system design in mould. (10)
(ii) Write detailed note on split cavity moulds.