

PART B — (5 × 16 = 80 marks)

11. (a) (i) List out the advantages and disadvantages of jigs and fixtures. (8)
(ii) Discuss in detail about the locating methods and devices. (8)
Or
- (b) Sketch and explain any two of the mechanically actuated clamps. (16)
12. (a) Design and develop a jig which can be used for drilling holes on the web of a flange coupling.
Or
- (b) Design a lathe fixture which can be used to turn non-cylindrical components and explain.
13. (a) Sketch and explain the various press working terminologies.
Or
- (b) Design and sketch the views of a compound die that produces steel washers. Dimensions of the washer may be assumed suitably.
14. (a) (i) Differentiate bending, forming and drawing. (6)
(ii) Explain the method of calculating the press capacity for bending, forming and drawing. (10)
Or
- (b) Explain the design procedure for the design of reverse re-drawing and combination dies.
15. (a) (i) How the moulds and dies are selected for various processing methods? (8)
(ii) Explain the concept of mould and die design and list the materials used. (8)
Or
- (b) Discuss in detail with suitable examples :
(i) Design of feed system and cooling system. (8)
(ii) Split cavity moulds. (8)