

## CHAPTER 9

### METAL FORMING

#### *Questions*

1. Compare between machining processes and metal forming processes.
2. List the advantages of cold forming and hot forming processes.
3. Illustrates the sequence of rolling operations for manufacturing rails.
4. List the structural sections that can be manufactured using rolling operations.
5. Examine with the aid of sketch the continuous wire-drawing process.
6. Show with the aid of sketches the different between direct and indirect extrusion.
7. List the advantages of extrusion processes.
8. Define the forging process.
9. Give examples for the forged products.
10. Sketch the following smith-forging operations:  
(a) Upsetting; (b) piercing a short billet; (c) Piercing a long billet; (d) cutting off; (e) bending.
11. Sketch the steps used for production of a large motor shaft and large rings by smith forging.