

PART B — (5 × 16 = 80 marks)

11. (a) (i) Explain operation of cupola furnace with necessary sketch. (8)
(ii) Explain any four casting defects, causes and remedies. (8)

Or

- (b) (i) Explain the various types of pattern used in Mould making. (8)
(ii) Enumerate the steps in sequence for producing Shell Moulding. (8)

12. (a) (i) Explain the equipment of an Oxy-Acetylene gas welding. (8)
(ii) Explain about the equipment and operation of GTAW process. (8)

Or

- (b) (i) Explain the variants of Thermit welding process. (8)
(ii) Explain the Resistance spot welding process with a neat sketch. (8)

13. (a) (i) Explain with neat sketches various types of rolling stand arrangement. (8)
(ii) Explain with a neat sketch the process of wire drawing. (8)

Or

- (b) (i) Discuss the advantages and limitations of hot working and cold working. (8)
(ii) Explain the steps involved in drop forging with neat sketches. (8)

14. (a) (i) Explain any one stretch forming method. (8)
(ii) Explain the advantages and limitations of compound dies over progressive dies. (8)

Or

- (b) (i) Briefly explain with a neat sketch hydroforming. (8)
(ii) Elucidate process variables in Explosive forming. (8)

15. (a) (i) Explain how plastic sheets are manufactured by thermo forming method. (8)
(ii) Explain the process of transfer moulding and its applications. (8)

Or

- (b) (i) Enumerate various methods of bonding thermoplastics. (8)
(ii) Enumerate injection moulding of plastic products. (8)