

Aug/September 2022
B.Tech. (ME) (IV Semester)
Manufacturing Processes (PCC-ME-210/PCC-MAE-208/PCC-AE-208)

Time: 3 hours

Max. Marks: 75

PART A (1.5 marks each)

Q1

- (a) What are the materials that are generally used for preparing patterns?
- (b) What is the difference between gravity die casting and pressure die casting?
- (c) What are the advantages of hot working over cold working of metals?
- (d) What are the functions of cutting fluids?
- (e) State the working principle of a drilling machine.
- (f) What do you mean by tool signature?
- (g) What is meant by machinability?
- (h) Enumerate the various methods of making gears.
- (i) How is polarity defined in the case of a DC welding source?
- (j) State the principle of resistance welding.

PART B

Q2

- (a) Discuss the various elements of a gating system. (10)
- (b) Explain the various properties of moulding sand. (5)

Q3

- (a) Explain with sketches the difference between forward hot extrusion and backward hot extrusion. (10)
- (b) Briefly explain the principle of rolling with a neat sketch. (5)

Q4

- (a) Describe the principle parts of the milling machine by neat sketch (10)
- (b) Discuss the requirements of a good cutting fluid. (5)

Q5

- (a) Explain various types of chips with neat sketches. (10)
- (b) Define tool life. State the factors which affect tool life. (5)

Q6

- (a) Discuss the various methods of gear finishing. (10)
- (b) Explain the principle of gear hobbing. (5)

Q7

- (a) Describe the principle of an oxy-fuel gas welding process. Discuss the types of flames obtained in an oxy-acetylene gas welding process giving the applications. (10)
- (b) Discuss with the help of neat sketch, the principle of arc welding (5)