

**DIPLOMA EXAMINATION IN ENGINEERING/TECHNOLOGY/MANAGEMENT/
COMMERCIAL PRACTICE, APRIL- 2023**

MANUFACTURING PROCESS

[Maximum marks: 100]

(Time: 3 Hours)

PART – A

Maximum marks : 10

I (Answer *all* the questions in one or two sentences. Each question carries 2 marks)

1. Distinguish between comparator and gauges.
2. List any two linear measuring and angular measuring instruments.
3. List two functions of flux coating in electrodes.
4. List four main hand forging tools.
5. What is fibre reinforced plastics.

(5 x 2 = 10)

PART – B

Maximum marks : 30

II (Answer any *five* of the following questions. Each question carries 6 marks)

1. Explain with sketch the working of outside micrometer.
2. Compare the characteristics of AC and DC welding.
3. Briefly explain the three types of flames in oxy acetylene welding.
4. Explain BCC, FCC and HCP crystal structures.
5. Differentiate between upsetting and drawing down.
6. Explain the properties of moulding sand.
7. Explain the function of runner and risers.

(5 x 6 = 30)

PART – C

Maximum marks : 60

(Answer one full question from each unit. Each full question carries 15 marks)

UNIT –I

- III. (a) Explain the working of pneumatic comparator with a neat sketch. (8)
- (b) Explain with sketch the uses of plug gauge, snap gauge and feeler gauge. (7)

OR

- IV.(a) Explain with sketch the working of Vernier bevel protractor. (8)
(b) Sketch and explain dial gauge. (7)

UNIT-II

- V.(a) Differentiate between welding, soldering and brazing. (8)
(b) Explain submerged arc welding with a neat sketch. (7)

OR

- VI. (a) Explain the advantages and limitations of welding. (8)
(b) Sketch and label gas welding arrangement. (7)

UNIT-III

- VII. (a) Differentiate between hot working and cold working. (8)
(b) Explain work hardening and solid solution hardening. (7)

OR

- VIII.(a) Explain direct and indirect extrusion hot working processes with sketches. (8)
(b) Explain the classification of forging processes. (7)

UNIT-IV

- IX. (a) Explain the working of hot chamber direct injection die casting machine. (8)
(b) Explain the process of slush casting. (7)

OR

- X. (a) List and explain various pattern allowances. (8)
(b) Explain with sketch the blow moulding process. (7)
