

**DIPLOMA EXAMINATION IN ENGINEERING/TECHNOLOGY/MANAGEMENT/  
COMMERCIAL PRACTICE, APRIL - 2024**

**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. Define precision measuring instruments.
2. Explain Arc length.
3. Name different types of Dislocations.
4. Define (a) Moulding (b) Casting
5. What is meant by Thermosetting plastic? (5 x 2 = 10)

**PART – B**

**Maximum marks: 30**

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

1. Differentiate between direct measuring and indirect measuring instruments.
2. Write notes on (a) Snap Gauge (b) Screw pitch gauge
3. List the advantages and disadvantages of welding.
4. Explain non-destructive testing of welded joints.
5. List down various types of cold working operations.
6. Describe the types of hand hammers.
7. What are the properties of moulding sand? (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) Sketch and explain the parts of a Vernier caliper. (8)  
(b) Explain the working of a Dial indicator. (7)

**OR**

- IV.** (a) How the measuring instruments are classified? (8)  
(b) Illustrate the working of a Depth micrometer with figure. (7)

**UNIT - II**

- V.** (a) Explain TIG welding process with a sketch. (8)  
(b) Explain gas welding flames. (7)

**OR**

- VI.** (a) What are the arc welding equipment's? (8)  
(b) What are Welding defects? Explain the different types of Welding defects. (7)

**UNIT - III**

- VII.** (a) Differentiate between Cold working & Hot working. (8)  
(b) Describe BCC, FCC and HCP. (7)

**OR**

- VIII.** (a) Explain different Forging methods. (8)  
(b) Explain various Crystal defects. (7)

**UNIT - IV**

- IX.** (a) Describe various Pattern allowances. (8)  
(b) Write down the composition of Moulding Sand. (7)

**OR**

- X.** (a) Sketch and explain plastic extrusion Moulding. (8)  
(b) Describe the common defects in Casting. (7)

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