

**DIPLOMA EXAMINATION IN ENGINEERING/TECHNOLOGY/MANAGEMENT/  
COMMERCIAL PRACTICE, NOVEMBER - 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 direct measuring instrument.
2. State the functions of filler rod in welding operation.
3. Define forging.
4. List the hot working operations.
5. State the function of runner.

(5 x 2 = 10)

**PART – B**

**Maximum marks: 30**

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

1. Explain the use of different gauges.
2. Describe the working principle of a vernier depth gauge.
3. List the application of welding.
4. Explain the welding defects.
5. List the cold working operations.
6. Explain the advantages and disadvantages of hot working operation.
7. List the casting defects.

(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 working of vernier caliper. (8)
- (b) Describe the working of optical comparators. (7)

**OR**

- IV.** (a) Explain the working of pneumatic comparators. (8)  
(b) Classify the different types of gauges. (7)

**UNIT - II**

- V.** (a) State the different types of welding flame. (8)  
(b) Explain MIG welding with proper figure. (7)

**OR**

- VI.** (a) List out the advantages and disadvantages of welding process. (8)  
(b) Explain submerged arc welding with neat figure. (7)

**UNIT - III**

- VII.** (a) Explain BCC, FCC & HCP. (8)  
(b) Explain the open die forging operation. (7)

**OR**

- VIII.** (a) Explain the hot working operation. (8)  
(b) Differentiate hot drawing and hot piercing. (7)

**UNIT – IV**

- IX.** (a) Explain the properties of molding sand. (8)  
(b) Explain the processes of hot chamber die casting with neat figure. (7)

**OR**

- X.** (a) Explain different types of patterns. (8)  
(b) List the cleaning methods of casting and explain it. (7)

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