

**DIPLOMA EXAMINATION IN ENGINEERING/TECHNOLOGY/
MANAGEMENT/COMMERCIAL PRACTICE, NOVEMBER – 2021**

MANUFACTURING PROCESS

[Maximum Marks: 75]

[Time: 2.15 Hours]

PART-A

(Answer *any three* questions in one or two sentences. Each question carries 2 marks)

- I. 1. Name any two angular measuring instruments.
2. Define welding.
3. Define the term strain hardening.
4. List any four pattern allowances.
5. Mention the function of runner and riser in casting. (3 x 2 = 6)

PART-B

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

- II 1. Draw a sigma comparator and mark its parts.
2. Illustrate plug gauge with figure.
3. Distinguish pressure welding and fusion welding.
4. Write down the differences between welding, brazing and soldering.
5. Write the advantages and limitations of forging.
6. Sketch and explain the forging hand tool, fullers.
7. Explain sweep pattern used in casting with figure. (4 x 6 = 24)

PART-C

(Answer *any of the three units* from the following. Each full question carries 15 marks)

UNIT – I

- III (a) With the help of a sketch, illustrate Reed type mechanical comparator. (8)
(b) Sketch a depth micrometer and explain its working. (7)

OR

- IV (a) Write down the principle and procedure of measurement using Vernier height gauge with the help of a sketch. (8)
(b) With a neat sketch, explain the following standard gauges. (7)
(i) Feeler gauge (ii) Standard wire gauge

UNIT – II

- V (a) Explain the types of oxy-acetylene flames with figure. (8)
(b) Write the advantages and limitations of welding. (7)

OR

- VI (a) List and describe any four safety devices used in welding. (8)
(b) Sketch and explain atomic-hydrogen welding. (7)

UNIT- III

- VII (a) Describe the merits and demerits of cold working in comparison with hot working. (8)
(b) Illustrate body-centered cubic structure with figure. (7)

OR

- VIII (a) Illustrate the following hot working processes.
(i) Hot drawing (ii) Hot piercing (8)
(b) Explain the two linear defects (dislocations) in crystal structure. (7)

UNIT - IV

- IX (a) With figure, explain permanent mould (gravity die) casting. (8)
(b) State and explain draft allowance provided in pattern with figure. (7)

OR

- X (a) List and explain any five properties of moulding sand. (8)
(b) With figure, explain the following types of pattern.
(i) Gated pattern (ii) Loose piece pattern (7)
