



TED (15) – 3023

Reg. No. ....

(REVISION — 2015)

Signature .....

DIPLOMA EXAMINATION IN ENGINEERING/TECHNOLOGY/  
MANAGEMENT/COMMERCIAL PRACTICE — OCTOBER, 2019

MANUFACTURING PROCESS

[Time : 3 hours

(Maximum marks : 100)

PART — A

(Maximum marks : 10)

Marks

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

1. Define precision measuring instrument.
2. List the types of flux coating provided for welding electrode.
3. List the different crystal structure.
4. State the functions of a riser in moulding.
5. List any four material used for pattern making.

(5×2 = 10)

PART — B

(Maximum marks : 30)

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

1. Draw a neat sketch of a Vernier Caliper and mark all parts.
2. List the different types of gauges.
3. List the classification of welding process.
4. Explain the types of oxy-acetylene flame.
5. Describe metallic crystal structure BCC, FCC & HCP with sketches.
6. List the advantages and disadvantages of hot working process.
7. List any six types of patterns used in foundry shop.

(5×6 = 30)

## PART — C

(Maximum marks : 60)

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

## UNIT — I

- |         |   |   |
|---------|---|---|
| III (a) | Explain with sketch an outside micrometer.      | 8 |
| (b)     | Describe the working of a pneumatic comparator. | 7 |
| OR      |   |   |
| IV (a)  | Explain different types of limit gauges.        | 8 |
| (b)     | Describe reed type mechanical comparator.       | 7 |

## UNIT — II

- |        |   |   |
|--------|---|---|
| V (a)  | Describe basic setup for a metal arc welding.         | 8 |
| (b)    | Differentiate between welding, soldering and brazing. | 7 |
| OR     |   |   |
| VI (a) | Explain with sketch TIG welding process.              | 8 |
| (b)    | Describe any six welding defects.                     | 7 |

## UNIT — III

- |          |  |   |
|----------|--|---|
| VII (a)  | Explain various crystal defects.                           | 8 |
| (b)      | List and explain various types of hammers used in forging. | 7 |
| OR       |  |   |
| VIII (a) | Describe the term crystal growth and grain formation.      | 8 |
| (b)      | Explain open die forging and closed die forging.           | 7 |

## UNIT — IV

- |        |   |   |
|--------|---|---|
| IX (a) | List and explain various pattern allowances.      | 8 |
| (b)    | Describe the process investment casting.          | 7 |
| OR     |   |   |
| X (a)  | List and explain the properties of moulding sand. | 8 |
| (b)    | Explain plastic injection moulding process.       | 7 |
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