

TED (10)–3003

Reg. No.

(REVISION—2010)

Signature

SECOND SEMESTER DIPLOMA EXAMINATION IN MECHANICAL
ENGINEERING—OCTOBER, 2012

MANUFACTURING PROCESSES

[Time : 3 hours

(Maximum marks : 100)

PART—A

(Maximum marks : 10)

Marks

I Answer the following questions in one or two sentences. Each question carries 2 marks.

1. List out any four physical properties of materials.
2. Define least count of an instrument.
3. What is mean by forging ?
4. List the equipments required for arc welding.
5. Write any four characteristics of good timber.

(5×2=10)

PART—B

(Maximum marks : 60)

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

1. Explain the terms thermal conductivity and thermal diffusivity.
2. What are gauges, explain plug gauge ?
3. Enumerate the desirable characteristics of precision measuring instruments.
4. Differentiate upsetting and drawing down.
5. Compare AC and DC arc welding.
6. Write short notes on chisels and gauges.
7. Explain scraper and scraping.

(5×6=30)

PART—C

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

UNIT—I

- III (a) Differentiate between destructive and non-destructive test. 7
- (b) Draw the stress strain diagram for ductile materials and explain the salient points. 8

OR

- IV (a) Write short notes on :
- | | | |
|----------------|-------------------|---|
| (i) Strength | (iii) Brittleness | |
| (ii) Stiffness | (iv) Toughness. | 8 |
- (b) Explain ultrasonic test with suitable sketches. 7

UNIT—II

- V (a) Write short notes on :
- | | | |
|-------------------|------------------|---|
| (i) Surface gauge | (ii) Ring gauge. | 8 |
|-------------------|------------------|---|
- (b) Sketch and describe the working of a depth micrometer. 7

OR

- VI (a) Describe the following :
- | | | |
|-----------------------|------------------------|---|
| (i) Screw pitch gauge | (ii) Telescopic gauge. | 8 |
|-----------------------|------------------------|---|
- (b) With a neat sketch explain the working of a Vernier caliper. 7

UNIT—III

- VII (a) Describe the working of TIG welding with sketch. 7
- (b) With the help of sketches, describe the types of oxy acetylene flame. 8

OR

- VIII (a) Explain the working of MIG welding with sketch. 7
- (b) What do you understand by soldering and brazing? Describe the principle of each. 8

UNIT—IV

- IX (a) Describe with sketches, the procedure of making green sand moulds by turn-over method. 8
- (b) Explain the common allowances provided on patterns. 7

OR

- X (a) Write short notes on :
- | | | |
|------------------|---------------|---|
| (i) Chipping | (iii) Sawing | |
| (ii) Draw filing | (iv) Tapping. | 8 |
- (b) How files are classified? Name and explain the various types of files. 7