

DIPLOMA EXAMINATION IN ENGINEERING/TECHNOLOGY/  
MANAGEMENT/COMMERCIAL PRACTICE — APRIL, 2018

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. Differentiate precision and non precision instruments.
2. Name the defects in welding processes.
3. What are the difference between cold working and hot working ?
4. List any four properties of moulding sand.
5. Write four space lattices.

(5×2 = 10)

PART — B

(Maximum marks : 30)

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

1. Explain with neat sketch and working of Vernier caliper.
2. Illustrate the working of Metal Inert Gas (MIG) welding.
3. Distinguish the metallic crystal structure BCC- FCC.
4. Explain the different types of moulding sand.
5. Define gas welding and illustrate the types of flame used in gas welding.
6. Illustrate with sketch the plastic extrusion injection moulding. T.
7. Explain the deformation of metal crystal structure.

(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 different types of Gauges. 7  
(b) Illustrate the working of pneumatic comparators. 8

OR

- IV (a) Explain with sketch the mechanical comparators. 7  
(b) Describe the classification of measuring instruments. 8

UNIT — II

- V (a) Explain various types of welded joints. 7  
(b) Explain the working of arc welding transformer. 8

OR

- VI (a) What are the functions of welding electrode in metal arc welding ?  
Explain its classification. 7  
(b) Describe welding, soldering and brazing. 8

UNIT — III

- VII (a) Write the imperfections in crystal and explain with sketch. 7  
(b) Illustrate the following hot working processes of metals.  
(i) Hot rolling                      (ii) Deep drawing                      (iii) Hot spinning 8

OR

- VIII (a) Explain with sketch the following forging tools.  
(i) Anvil                                      (ii) Swage block  
(iii) Fullers                                      (iv) Punch and drift 7  
(b) Describe with sketch the seam less tubing processes. 8

UNIT — IV

- IX (a) List and explain various pattern allowances. 7  
(b) State the processes of gravity die casting and pressure die casting. 8

OR

- X (a) Explain the different types of mouldings. 7  
(b) Explain the cleaning of casting. 8