# 17402

**21819**

**3 Hours / 100 Marks** Seat No. | | | | | | | | |

*Instructions* – (1) All Questions are *Compulsory.*

(2) Answer each next main Question on a new page.

(3) Illustrate your answers with neat sketches wherever necessary.

(4) Figures to the right indicate full marks.

(5) Assume suitable data, if necessary.

(6) Use of Non-programmable Electronic Pocket Calculator is permissible.

(7) Mobile Phone, Pager and any other Electronic Communication devices are not permissible in Examination Hall.

(8) Use of steam tables, logarithmic, Mollier's chart is permitted.

**Marks**

**1.** a) **Attempt any SIX of the following:** **12**

(i) Explain principle of Rolling.

(ii) Define extrusion process. State its anyone application.

(iii) Give classification of press.

(iv) Enlist different types of pattern.

(v) List out various lathe operations.

(vi) List out application of soldering and brazing.

(vii) Define shut height in press machine.

(viii) List any four forging operations.

**Marks**

b) **Attempt any TWO of the following:** **8**

(i) Explain notching and lancing operation with sketch.

(ii) Explain bench moulding with sketch.

(iii) Explain with sketch electron beam welding.

**2. Attempt any FOUR of the following:** **16**

a) Differentiate between hot and cold rolling.

b) Define tool signature with example.

c) Explain various bending operation with sketch.

d) Explain laser beam welding.

e) Explain with sketch investment casting.

f) State different types of plastics. Give their properties.

**3. Attempt any FOUR of the following:** **16**

a) Explain four high roll mill with a neat sketch.

b) Differentiate between punching and blanking with neat sketch.

c) Give any four properties of moulding sand.

d) Explain thread cutting operation on lathe machine.

e) Explain various elements of gating system.

f) Explain upsetting and fullering operations in forging.

**4. Attempt any FOUR of the following:** **16**

a) Explain with sketch drawing operation.

b) Explain direct and indirect extrusion process and state is advantages.

c) Explain various colour code used for pattern.

d) Differentiate between soldering and brazing.

e) Explain various cutting parameter in lathe operations.

f) Explain injection moulding with sketch.

**Marks**

**5. Attempt any FOUR of the following:** **16**

a) Explain progressive die with neat sketch.

b) Explain closed die forging with sketch.

c) Explain centrifugal casting with sketch.

d) Give nomenclature of twist drill with neat sketch.

e) Explain plastic extrusion moulding process with sketch.

f) Explain flow moulding process with sketch.

**6. Attempt any TWO of the following:** **16**

a) List out various die casting defects its causes and remedies.

b) Differentiate between TIG and MIG welding.

c) (i) Explain reaming and spot facing operation on drilling machine.

(ii) Explain different types of allowances provided on pattern.