22568

23124

3 Hours / 70 Marks Seat No. | | | | | | | | |

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

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

(3) Figures to the right indicate full marks.

(4) Assume suitable data, if necessary.

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

(6) Preferably, write the answers in sequential order.

Marks

1. Attempt any FIVE of the following : **10**

a) State advantages of cold working.

b) Define upset forging process.

c) State any four defects in wire drawing.

d) Define 'Draft allowance' in pattern making.

e) List any four properties of moulding sand.

f) Define weldability and State its significance.

g) List any four properties of plastics.

Marks

2. Attempt any THREE of the following : **12**

a) Explain cluster rolling mill with sketch.

b) Explain impact extrusion with sketch.

c) Explain tube drawing process with sketch.

d) State advantages of centrifugal casting. List it's applications.

3. Attempt any THREE of the following : **12**

a) Compare between press forging and hammer forging.

b) Differentiate between hot rolling and cold rolling.

c) Describe design consideration in casting.

d) List any four casting defects and suggest remedies for them.

4. Attempt any THREE of the following : **12**

a) Suggest suitable process for manufacturing following products -

i) Tube of tooth paste

ii) Aluminium wire

iii) Square rods

iv) Corrugated sheets.

b) Explain colour coding of pattern and state its necessity.

c) Explain the process of sand preparation and sand conditioning.

d) Select relevant joining process for following joints and Justify your answer.

i) Printed circuit board

ii) Cemented carbide tipped tool with shank.

iii) Pressure vessel (Thick plate)

iv) Thin M.S. plate

e) Differentiate between soldering and brazing.

Marks

5. Attempt any TWO of the following : **12**

a) Describe various welding flames used in Gas Welding with sketches. State their specific applications.

b) Compare TIG and MIG welding on the basis of –

i) Operating Principle

ii) Electrode used

iii) Advantages

iv) Metals welded

v) Limitations

vi) Working principle

c) Explain with sketch –

i) Vacuum forming

ii) Calendering

6. Attempt any TWO of the following : **12**

a) State functions of gating and risering system. Explain the elements of gating and risering system with sketch.

b) Explain Laser beam welding with sketch. State its advantaged and applications.

c) Explain Transfer moulding of plastics with sketch. State is advantages and application.

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