17973

12223

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 answer 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.

Marks

1. Attempt any TEN of the following: **20**

a) What is forging? State different types.

b) State the types of rolling mills.

c) Define Extrusion. State its types.

d) State the operations performed on press machine.

e) What is the function of flywheel in press machine.

f) What is core print?

g) State the different types of moulding sand.

h) Name any four material used for making patterns.

i) State the names of fillers used in soldering and brazing.

j) State the types of resistance welding.

P.T.O.

Marks

k) State any two applications of soldering and brazing.

l) State the types of operations performed on drilling m/c.

m) Define taper and state how it is calculated?

n) Write any four properties of plastics.

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

a) Compare hot rolling with cold rolling.

b) Explain with neat sketch forward extrusion.

c) Explain open die forging with neat sketch.

d) What is upset forging? State any two applications of upset forging.

e) State the types of dies used in press work. Explain any one with neat sketch.

f) Draw neat labelled sketch of die set components.

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

a) Explain principle of rolling with neat sketch.

b) Write detailed classification of press machines.

c) Explain with neat sketch drawing operation performed on press machine.

d) Compare notching and lancing operation.

e) Write the basic steps in making casting.

f) Define pattern. State different types of patterns.

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

a) Sketch and explain elements of gating system.

b) Define core. State different types of core.

c) Explain centrifugal casting with neat sketch.

d) Write any two casting defects, their causes and remedies.

e) Differentiate between TIG and MIG welding.

f) Explain seam welding with neat sketch.

Marks

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

a) Explain hot chamber die casting with neat sketch.

b) Explain Laser beam welding with neat sketch.

c) Explain set-up of electric arc welding with neat sketch.

d) What is tool signature? Explain with example.

e) Explain with neat sketch following operations :–

i) Chamfering

ii) Grooving

f) State difference types of taper turning methods. Explain any one.

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

a) Draw neat labelled sketch of Radial drilling machine.

b) Explain counter boring operation with neat sketch.

c) Define :–

i) Cutting speed

ii) Feed in case of lathe machine.

d) Explain with neat sketch compression moulding.

e) Differentiate between thermoplastic and thermosetting plastic.

f) State the moulding processes for following products :–

i) Plastic Bottles

ii) ATM cards

iii) Tool Handles

iv) Plastic Jugs

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