17973

23124

3 Hours / 100 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) Mobile Phone, Pager and any other Electronic Communication devices are not permissible in Examination Hall.

Marks

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

a) Explain indirect extrusion with neat sketch.

b) List any four components than can be produce by cold rolling process.

c) Explain edge bending process with neat sketch.

d) List any four pattern making materials.

e) State any two applications of Laser beam welding and Gas welding.

f) State any two flux and filler materials used in brazing operation.

g) Draw a neat sketch of single point cutting tool and show -

i) end cutting edge angle

ii) end relief angle.

iii) back rake angle

iv) side cutting edge angle.

Marks

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

a) Differentiate between open die and close die forging.

b) Explain with neat sketch notching and lancing operation.

c) What are cores and core prints ? Sketch any one type of core.

d) State any two advantages and applications of seam welding.

e) Explain with neat sketch reaming and boring operation in drilling.

f) Suggest the plastic moulding process for the following parts.

i) electric switches

ii) mug

iii) Bottle

iv) sheets

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

a) Explain with neat sketch three high rolling mill.

b) State the function of –

i) Pilot

ii) Stripper

iii) Guide post

iv) Bolster plate

c) Explain with neat sketch hot chamber die casting process.

d) State the causes and remedies of any two types of welding defects.

e) Explain with neat sketch knurling and chamfering operation.

f) Define thermosetting and thermoplastic plastics. Give two examples of each.

Marks

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

a) Draw a neat and labeled sketch of upset forging process. List any four components produced using upset forging.

b) Classify the various types of presses.

c) State any four properties of moulding sand. Explain any two.

d) Differentiate between TIG and MIG (Any four points)

e) How lathe can be specified. Explain with neat sketch. (Any four parameters)

f) Draw a neat and labeled sketch of twist drill nomenclature.

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

a) Explain with neat sketch progressive die. (Construction and working). State any two applications.

b) Draw a neat sketch of cupola furnace. Explain combustion zone and reducing zone.

c) Draw a neat sketch of radial drilling machine. Explain its construction and working. State any two advantages.

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

a) State any three advantages and disadvantages of Direct extrusion process. List any two applications.

b) Explain with neat sketch investment casting process. State any two application of investment casting process.

c) Explain with neat sketch injection moulding process. State any two advantages and applications.

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