17327

21819

4 Hours / 100 Marks Seat No. | | | | | | | | |

Instructions : (1) All Questions are *compulsory.*

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

(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.

Marks

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

(a) State the types of compression mould.

(b) State the types of blow mould.

(c) Define parting surface.

(d) Define core and cavity.

(e) State the types of bolster plate.

(f) Define runner and state any two types of runner.

(g) Define gate. List any two types of gate.

(h) State the types of sprue puller.

(i) Draw a neat labelled diagram of U-type cooling circuit.

(j) What is venting ?

(k) Define casting.

(l) List any two components of cylindrical grinding machine and write the function of each.

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

(a) What is an injection mould ? State the standard components of injection mould.

(b) Explain the purpose of insert with suitable sketch and example.

(c) State the functions of guide bush and draw a neat labelled diagram of guide bush.

(d) Discuss the selection criteria of runner.

(e) What is the necessity of ejection ? Draw a neat labelled diagram of blade ejection.

(f) Explain the cooling of core inserts with neat sketch.

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

(a) Explain any one type of mould attachment to the injection platen with neat sketch.

(b) Explain the calculation of runner size by giving suitable example.

(c) Explain the diaphragm gate and tab gate with a neat diagram.

(d) Explain the ejector plate assembly with neat diagram.

(e) State the types of cooling systems used for integer type cavity plate and draw the sketch.

(f) Explain the bench fitting method with neat sketch.

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

(a) Define bolster. Draw sketches of any two types of bolster.

(b) Define sprue bush. List the types of sprue bush. Draw sketches of sprue bush.

(c) Explain the concept of gate balancing with neat diagram.

(d) Explain pin ejection system with neat diagram.

(e) Compare U-type of cooling with Z-type of cooling.

(f) Explain pressure casting with neat diagram.

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

(a) Write function of registering and draw neat sketch of any one register ring.

(b) With a neat labelled diagram of Fan gate, state its uses.

(c) With a neat labelled diagram, explain taper locations.

(d) Explain ejector grid system with a neat labelled diagram.

(e) Why venting is necessary in an injection moulding ? Explain.

(f) Explain the principle and construction of spark machining with a neat diagram.

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

(a) With a neat labelled diagram explain the concept of guide pillars reinforced by tapered location.

(b) With a neat sketch explain sprue gate and sub-tunnel/ sub-surface gate.

(c) Explain sleeve ejection system with a neat sketch.

(d) Explain cooling of bolsters in an injection mould.

(e) Explain the principle and construction of plaining machine.

(f) Explain D-shaped ejection pin system with a neat diagram.
