17327

14115

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) Define hand-injection mould.

c) Define impression.

d) State the functions of core and cavity

e) Define runner. State its function.

f) Enlist any four gates.

g) State two functions and ejector grid.

h) State the applications of sleeve ejection.

i) State the purpose of cooling in a plastic moulding process.

j) What is venting?

k) Explain the term : electroplasting.

l) Define cold hobbing.

Marks

2. Answer any <u>FOUR</u> of the following: **16**

a) What is compression mould? State its standard components.

b) Define 'parting line'. Name types of parting line.

c) What are 'inserts'? Explain their function.

d) How is positioning of gate decided in an injection mould?

e) Explain construction and working of ejector plate assembly.

f) Explain the stepped cooling circuit with a neat sketch.

3. Answer any <u>FOUR</u> of the following: **16**

a) Compare manual clamping and automatic clamping system.

b) Explain the balanced gating system.

c) Explain sprue gate with a diagram.

d) Explain ejection mechanism.

e) State the types of cooling systems used for integer type core plate. Explain any one of them.

f) Explain the steps involved in bench fitting.

4. Answer any <u>FOUR</u> of the following: **16**

a) What is sprue bush? State its functions. Draw a diagram of sprue bush.

b) Explain the tab gate with a labelled diagram.

c) Explain the working of ejector rod and function of ejector rod bush in an injection mould.

d) Explain pin ejection system with a labelled diagram.

e) How is cooling of bolster carried out in an injection mould?

f) Describe the construction of lathe.

Marks

5. Answer any <u>FOUR</u> of the following: **16**

a) Define :

(i) bolt

(ii) bolster

(iii) guide bush

(iv) register ring

b) Define a 'gate'. Draw a labelled diagram of an edge gate.

c) What is a retaining plate and ejector plate? State their functions.

d) Explain cooling of shallow core inserts in an injection mould.

e) Explain cooling of deep core inserts in an injection mould.

f) Explain the principle and construction of cylindrical grinding machine.

6. Answer any <u>FOUR</u> of the following: **16**

a) Explain the types of mould attachment to the injection platen.

b) What is a location ring? Explain its types.

c) Draw a labelled diagram of diaphragm gate and state its use.

d) Explain the layout of runner system in an injection mould.

e) Explain air ejection system.

f) What is casting? How is it useful in making of a mould?
