17549

14115

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) ***Assume*** *suitable data,* ***if*** *necessary.*

MARKS

1. Answer **any ten** : **(10×2=20)**
   a) Define runner and a gate.
   b) Define split mould.
   c) State the type of mould used for threaded component.
   d) Suggest type of mould for plastic connector and pipe fitting.
   e) Why is mould surface always plated with nickel ?
   f) What do you mean by side cavity and care ?
   g) State utility of standard inserts in compression mould.
   h) Write down function of locating ring.
   i) Enlist types of transfer mould.
   j) Write down the types of heat treatment used for steel.
   k) State any two limitations of flash type compression mould.
   l) List any four standard parts of compression mould.
   m) Write down function of third plate in three plate injection mould.
   n) What are the types of mechanism used for ejecting threaded products ?

2. Answer **any four** : **(4×4=16)**
   a) Draw sketch of two cavity plate injection mould. Write function of each part.
   b) List various types of actuation methods. Explain any one with a neat sketch.
   c) Explain Dog-Leg-Cam actuation system in injection mould.
   d) Explain selection criteria of split mould.
   e) State necessity of gating system. Explain ring gate with a sketch.
   f) Explain any one type of mould for side core product with a labelled diagram.

P.T.O.

MARKS

3. Answer **any four** : **(4×4=16)**
   a) State function of a runner. Draw its various cross sections. Mentioned its use.
   b) Explain the purpose of split mould.
   c) With a neat sketch explain finger cam actuation method.
   d) What is angle fit method ? State its advantages.
   e) Write down design criteria for internally threaded mould.
   f) Explain the mechanism of unscrewing.

4. Answer **any four** : **(4×4=16)**
   a) Differentiate between spring actuation and hydraulic actuation.
   b) Explain the design layout for bottle cap by unscrewing method.
   c) What do you mean by balancing of runner ? Why is it required ?
   d) Explain flash mould.
   e) Explain design aspects of three plate mould.
   f) Explain classification of mould material.

5. Answer **any four** : **(4×4=16)**
   a) Explain external thread.
   b) Explain the component of feed system in three plate mould.
   c) Differentiate between hardening and nitriding.
   d) Explain necessity of three plate mould.
   e) Describe construction and working of integral pot type transfer mould.
   f) State different factors for runner designing.

6. Answer **any four** : **(4×4=16)**
   a) Explain single and multicavity mould with different gating system.
   b) Differentiate between compression and transfer mould with respect to their construction.
   c) Describe constructional features of fully positive mould.
   d) Explain process of chrome plating.
   e) Differentiate between two plate and three plate mould.
   f) What is heat treatment ? Why is it necessary ?
