17549

21415

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 answers with ***neat*** *sketches* ***wherever*** *necessary.*
(4) Figures to the ***right*** *indicate* ***full*** *marks.*
(5) ***Assume*** *suitable data,* ***if necessary****.*

MARKS

1. Answer **any ten** : **(10×2=20)**
   a) Name the materials used for injection mould.
   b) Define MOULD.
   c) What is nitriding ?
   d) State the functions of core and cavity.
   e) Define side core.
   f) State the function of side cavity.
   g) Name types of steel.
   h) Define split mould.
   i) Name various injection moulds. Why is it done ?
   j) What is polishing of a mould ?
   k) Classify mould materials.
   l) Draw a neat labelled diagram of pitch circle layout.
   m) What is a three plate mould ?

2. Answer **any four** : **(4×4=16)**
   a) Draw a neat labelled diagram of a two plate mould.
   b) Explain the selection criteria of a split mould.
   c) Draw neat labelled diagrams of any two external threaded components.
   d) What is the necessity of a three plate mould ?
   e) Draw a neat labelled diagram of a three plate mould.
   f) Explain with a neat sketch a positive type of compression mould.

P.T.O.

MARKS

3. Answer **any four** : **(4×4=16)**
   a) What is a runner ? State the function of a runner and name the types of runner.
   b) What is a gate ? Name any two types of gates with a neat diagram.
   c) Explain with a neat sketch dog leg cam mechanism.
   d) Give the types of moulds for internally threaded components and explain any one of them.
   e) Differentiate between a three plate and a two plate mould.
   f) Explain with a neat sketch a semi positive type of compression mould.

4. Answer **any four** : **(4×4=16)**
   a) Draw a neat labelled diagram for the mould of water connector.
   b) Explain the finger cam actuation method with a neat sketch.
   c) Explain with a neat sketch in-line layout of impressions.
   d) Explain runner plate design in a three plate mould.
   e) Write constructional features of a flash type of compression mould.
   f) What is heat treatment ? Why is it necessary ?

5. Answer **any four** : **(4×4=16)**
   a) Describe angle lift method.
   b) What are different mechanisms of unscrewing mould ? Explain any one of them.
   c) Explain different design aspects of a three plate mould.
   d) Explain multicavity mould with different gating system.
   e) Describe integral pot type of transfer mould with neat diagram.
   f) Explain auxiliary ram type transfer mould with a neat diagram.
   g) Name the types of surface treatment methods and explain the method of hardening a mould.

6. Answer **any four** of the following : **(4×4=16)**
   a) Explain with a neat diagram spring actuation method.
   b) What is hydraulic actuation method ?
   c) Draw a neat labelled diagrams of any two internally threaded components.
   d) List different components of a three plate mould and write functions of each components.
   e) Compare compression and transfer moulds.
   f) Explain the necessity of nickel plating method for an injection mould.
