

**GUJARAT TECHNOLOGICAL UNIVERSITY****Diploma Engineering - SEMESTER-VIII • EXAMINATION – WINTER • 2016****Subject Code: 3362301****Date: 20-10-2016****Subject Name: Design for Blow & Thermoforming Moulds****Time: 10:30 am - 01:00 pm****Total Marks: 70****Instructions:**

1. Attempt all questions.
2. Make Suitable assumptions wherever necessary.
3. Figures to the right indicate full marks.
4. Use of programmable & Communication aids are strictly prohibited.
5. Use of only simple calculator is permitted in Mathematics.
6. English version is authentic.

- Q.1** Answer any seven out of ten. **14**
1. Define pinch off.
  2. Enlist various types of Mould Materials for blow molds.
  3. Give name of any one mould release agent.
  4. Define swell ratio.
  5. What is the meaning of Welding edges.
  6. List the materials used for making plugs for thermoforming molds.
  7. Enlist mold finishing techniques.
  8. Sketch any one plug design.
  9. Write meaning of undercuts.
  10. What is the function of Vacuum Holes in vacuum forming mold.
- Q.2**
- (a) Describe Cooling designs for neck in blow molds. **03**  
OR
- (a) Give important points to be kept in mind while design blow mould parting line. **03**
- (b) Discuss various flash removal methods in blow molding. **03**  
OR
- (b) Write short note on Alignment pins. **03**
- © Explain any one mould cooling method for blow mould main body. **04**  
OR
- © Describe material selection criteria for blow mould. **04**
- (d) Write short note on Blow Mould Venting. **04**  
OR
- (d) With sketch explain flash pockets. **04**
- Q.3**
- (a) Explain importance of mould parting line in a blow mould. **03**  
OR
- (a) Give factors to be considered for deciding impression layout for thermoforming mold. **03**
- (b) List the mould material requirements for a thermoforming mould. **03**  
OR
- (b) Explain importance of mould cooling for a thermoforming mould. **03**
- (c) Write difference between Injection Blow Mould & Extrusion Blow Mould. **04**  
OR
- (c) Write short note on Plug material. **04**
- (d) What is draw ratio? Give importance of it. **04**  
OR
- (d) Write various mathematical formulas to find number of impressions for a **04**

given forming platform size.

- Q.4** (a) Give basic concepts about plug design. **03**  
OR  
(a) Write in brief about Chamfers in thermoforming mold. **03**  
(b) Write a short note on mould cleaning methods for blow moulds. **04**  
OR  
(b) List the ancillary elements used in a blow mould and explain any one in brief. **04**  
(c) Draw only sectional elevation of a blow mold assembly for a product of your choice. **07**
- Q.5** (a) Describe Sheet clamping mechanisms in thermoforming mold. **04**  
(b) Explain in brief about Position of vent holes in thermoforming mold. **04**  
(c) Give short note on Surface texturing in thermoforming. **03**  
(d) Write short note on Draft Angle. **03**

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