

GUJARAT TECHNOLOGICAL UNIVERSITY**DIPLOMA ENGG.- VIIth SEMESTER-EXAMINATION – JUNE/JULY- 2012****Subject code: 372304****Date: 02/07/2012****Subject Name: Blow & Thermoforming Mould Design****Time: 02:30 pm – 05:00 pm****Total Marks: 70****Instructions:**

1. Attempt all questions.
2. Make suitable assumptions wherever necessary.
3. Figures to the right indicate full marks.
4. English version is considered to be Authentic

Q.1 (a) Design and draw plan and sectional elevation of assembly of extrusion blow mould for a plastic product of your choice. Draw dimensioned product drawing also. **14**

Q.2 (a) Explain about prototype and production type thermoforming mould and list various mould making materials used separately for each of them. **07**
 (b) List various types of mould materials used in construction of blow mould. Give characteristics of each material in brief. **07**

OR

(b) List various types of extruded parison die head. Explain any one with neat sketch. **07**

Q.3 (a) Explain about shrinkage in thermoforming and its effect on draft/ taper in thermoform mould design. **07**
 (b) Describe different properties required for thermoforming mould materials. **07**

OR

Q.3 (a) Calculate no. of impressions of disposable icecream cup having top dia. 50mm, bottom dia. 35mm & height 50mm which can be accommodated in a male thermoform mould. **07**
 Data : size of drape table= 500 × 500 mm², height of drape table= 75 mm, sheet thickness= 1 mm

(b) Draw plan and sectional elevation of thermoform mould for no. of impressions of disposable icecream cup calculated in above question Q.3 (a) OR. **07**

Q.4 (a) Explain significance of venting in blow mould design. Draw neat sketch of any one type of venting. **07**
 (b) Explain in brief about pinch-off section. **07**

OR

Q. 4 (a) List various ancillary elements for blow mould and explain any one of them. **07**
 (b) Write short note on 'blow mould cooling'. **07**

Q.5 (a) Explain parison stick design. **07**
 (b) Explain in brief about blow ratio and swell ratio. **07**

OR

Q.5 (a) Describe on blow mould material requirements. **07**
 (b) Explain preform mould construction used in injection blow moulding. **07**
