

Seat No.: _____

Enrolment No. _____

GUJARAT TECHNOLOGICAL UNIVERSITY
DIPLOMA ENGINEERING – SEMESTER – VII • EXAMINATION – SUMMER 2016

Subject Code: 372304

Date: 25/05/2016

Subject Name: Blow & Thermoforming Mould Design

Time: 10:30 AM TO 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. Each question carry equal marks (14 marks)

- Q.1** (a) Give introduction of blow mould design with the help of basic differences from conventional injection mould design. **07**
- (b) Explain pinch off section of extrusion blow mould design with neat sketch. **07**

- Q.2** (a) List various mould making materials used for proto type tooling & production tooling and state various properties required for thermoforming mould materials. **07**
- (b) Write short note on 'Surface texture' used in thermoforming mould. **07**

OR

- (b) Describe significance of venting in blow mould design and explain any one type of venting method with neat sketch. **07**

- Q.3** (a) Explain parting line selection criteria in blow mould design for various shapes of product with relevant sketches. **07**
- (b) Write importance of cooling in blow mould design and describe any one type of cooling method with neat sketch. **07**

OR

- Q.3** (a) Explain parison stick design used for injection blow moulding with neat sketch. **07**
- (b) Write short note on any one type of ancillary elements used in blow mould design. **07**

- Q.4** (a) Describe various types of mould materials and their characteristics used in blow mould design. **07**
- (b) Explain shrinkage and its effect on draft / taper in thermoforming mould. **07**

OR

- Q.4** (a) Explain significance of venting and vent hole design for thermoforming mould. **07**
- (b) Write in brief about Flash pocket, Swell ratio and Blow ratio for extrusion blow mould design. **07**

Q.5 Draw sectional elevation, plan and side view of blow mould assembly showing Pinch off section, Flash pocket, Venting, Cooling, Neck area, Bill of Materials etc. for any hollow product of your choice. **14**

OR

Q.5 Design and draw a male thermoforming mould for any disposable product of your choice. Draw product drawing with dimensions also. Assume suitable data for thickness of the sheet, dimensions of the product and size of the drape table. **14**
