olment No.
O

GUJARAT TECHNOLOGICAL UNIVERSITY

BE – SEMESTER – VI EXAMINATION – WINTER 2015

Date:15 /12/ 2015

Subj	ect (Code:162301	Date:	15 /12/ 201
U	e:2:3	1	'otal	Marks: 70
HIST U	1. 2.	Attempt all questions. Make suitable assumptions wherever necessary. Figures to the right indicate full marks.		
Q.1	(a)	Discuss the parts of a single screw extruder. Discuss detail on thrust bearing block.	s in	07
	(b)	_		07
Q.2	(a)	Discuss various types of heating systems in screw extrucin detail.	ders	07
	(b)	importance, applications, etc.	with	07
	(b)	OR Discuss raw material selection criteria for extrusion procin detail.	cess	07
Q.3	(a)	1. A plastic film, 0.10 mm thick, is required to have its orientation in the transverse direction twice that in the machine direction. If the film blowing die has an outer diameter of 130mm and an inner diameter of 126 mm, estimate the blow up ratio required and the lay flat film width. Neglect extrusion effects and assume there is no drawdown.	1	07
		2. Estimate the B-10 life of a thrust bearing given that: $P = 55$ MPa $N = 125$ rpm $K = 10/3$ B-10 std = 1,00,000 hrs		
	(b)	Discuss in detail, the manufacture of PVC FILMS. Given neat line diagram. OR	ve a	07
Q.3	(a)		ight	07
	(b)	_		07
Q.4	(a) (b)	With a neat line diagram, discuss the manufacture of HI Pipes.		07 07
Q.4	(a)	<u>=</u>		07
Q.4	(b)	various ways in which devaloatiization is done on extrud What is IBC? Discuss its importance.	ers.	07

Q.5	(a)	Discuss the manufacture of wires and cables.			
	(b)	Classify Twin Screw Extruders. Compare Coroating and	07		
		Counter rotating giving suitable examples.			
		OR			
Q.5	(a)	Fill in the blanks:	07		
		1. Back Pressure is due to			
		2. Output of single screw extruder depends on			
		3. Leakage flows seen in twin screw extruders are			
		4. Best performance in RGB is achived by using			
		5. Masterbatches are made byextruder.			
		6. UHMWPE is processed onExtruder			
		7. Material of screw in extruders is			
	(b)	Discuss in detail, Various screw designs. Give applications, advantages and Disadvantages.	07		
