

Seat No.: _____

Enrolment No. _____

GUJARAT TECHNOLOGICAL UNIVERSITY

BE - SEMESTER-V (NEW) EXAMINATION – WINTER 2018

Subject Code:2152307
Date:04/12/2018
Subject Name:Plastic Extrusion Technology
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.

			MARKS
Q.1*	(a)	Define : Extrudate ; Breaker plate, Reduction gear box	03
	(b)	Discuss about Ram Extruders with application	04
	(c)	Discuss difference between Single and Twin Screw extruders.	07
Q.2	(a)	Discuss thrust bearing block of twin screw extruders	03
	(b)	Discuss with line diagram manufacture of suction hose	04
	(c)	With neat diagrams, explain types of screws used on extruder machines.	07
		OR	
	(c)	Explain the heating systems used for extruder machines	07
Q.3	(a)	Discuss grooved barrel technology	03
	(b)	What is IBC? Explain with advantages and disadvantages	04
	(c)	With a neat line diagram, discuss manufacture of HDPE pipes	07
		OR	
Q.3	(a)	What is a Godet? Explain	03
	(b)	Differentiate between corotating and counter rotating twin screw extruder	04
	(c)	With a neat line diagram, discuss manufacture of Monofilaments.	07
Q.4	(a)	What is sizing?	03
	(b)	Explain the working principle of a single screw extruder and twin screw extruder	04
	(c)	With a neat line diagram, discuss manufacture of LDPE films	07
		OR	
Q.4	(a)	What are the key features of an extrusion line manufacturing HMHDPE films.?	03
	(b)	What is co extrusion? Explain how gauge variation is practically adjusted in such systems.	04
	(c)	What is Devolatilization? Discuss in detail with diagrams	07
Q.5	(a)	Fill in the blanks: 1. _____ die is used for secondary insulation 2. Die used for film manufacture is _____ 3. RGB having highest efficiency is _____ 4. Thrust bearing system of twin screw extruder	03

		works on _____ technology	
	(b)	What is the function of Melt pump?	04
	(c)	With a neat line diagram, discuss manufacture of Wires and Cables	07
		OR	
Q.5	(a)	Discuss raw material selection criteria for extrusion	03
	(b)	Discuss Nitriding process	04
	(c)	Discuss manufacture of Biaxially oriented films	07
