

GUJARAT TECHNOLOGICAL UNIVERSITY**BE- SEMESTER-V (NEW) EXAMINATION – WINTER 2020****Subject Code:3152308****Date:29/01/2021****Subject Name:Plastics Testing-II****Time:10:30 AM TO 12:30 PM****Total Marks: 56****Instructions:**

1. Attempt any FOUR questions out of EIGHT questions.
2. Make suitable assumptions wherever necessary.
3. Figures to the right indicate full marks.

	MARKS
Q.1 (a) Explain GPC technique with diagram.	03
(b) Define definition and equipment arrangement of VSP.	04
(c) What is HDT, derive the equation and diagram.	07
Q.2 (a) Give three names of test to study electrical properties.	03
(b) What is Arc Resistance and derive its significance.	04
(c) Explain Di-electric Strength and its test procedure.	07
Q.3 (a) Explain flame test to identify PVC .	03
(b) Give the name and explanation of testing procedure used to measure the percentage of oxygen present to support combustion of plastic.	04
(c) Explain UL94 flammability and its test procedure	07
Q.4 (a) Explain solvent stress cracking resistance.	03
(b) Derive luminous transmittance and haze.	04
(c) Give the name of the instrument used to measure water vapor permeability and derive procedure.	07
Q.5 (a) What is the importance to check weathering properties?	03
(b) Give definition of surface and volume resistivity	04
(c) Give full form of DMA and draw different fixtures to hold the samples.	07
Q.6 (a) Give any three uses of DSC.	03
(b) What is immersion test?	04
(c) Explain use Brookfield Viscometer and factor affecting.	07
Q.7 (a) Derive chemical test to identify Nylon.	03

- (b) Define- www.FirstRanker.com www.FirstRanker.com 04
- (i) Name of the gas used to nullify moisture in TGA.
- (ii) What is melting point of HDPE.
- (iii) Give sample size of tensile sample used in DMA.
- (iv) Give full form of ASTM D.
- (c) Explain application of DSC with its mechanical arrangement. 07
- Q.8** (a) Give two names of inert gas and its importance. 03
- (b) What is V-0, V-1 and V-2 in vertical burning. 04
- (c) Explain accelerated weathering using fluorescent UV. 07

www.FirstRanker.com