

GUJARAT TECHNOLOGICAL UNIVERSITY**BE SEM-VIII Examination May 2012****Subject code: 182302****Subject Name: Plastics Alloys and Blends****Date: 12/05/2012****Time: 10.30 am – 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.

- Q.1** (a) Discuss Equipments used for blending of polymers, particularly explain Banbury Mixer. **07**
- (b) Define following **07**
- | | |
|-----------------------------|-----------------------------|
| 1. Polymer blends | 2. immiscible polymer blend |
| 3. Homologous Polymer blend | 4. Compatible polymer blend |
| 5. Polymer alloy | 6. Pseudo IPN |
| 7. Full IPN | |
- Q.2** (a) Explain characterization of blends. **07**
- (b) Discuss PVC-NBR Blend in detail. **07**
- OR**
- (b) Discuss Liquid crystalline Polymer (LCP) blend in detail. **07**
- Q.3** (a) Explain Compatibilization of polymer blend by reactive processing. **07**
- (b) Discuss PC-ABS blend in detail **07**
- OR**
- Q.3** (a) Explain designing of polymer blend with flow chart. **07**
- (b) Discuss PC-PBT blend in detail. **07**
- Q.4** (a) Discuss techniques for determination of polymer-polymer miscibility. **07**
- (b) Explain in detail Thermodynamic approach for miscible blend. **07**
- OR**
- Q.4** (a) Explain about Polymer blends that are used in cable industry. **07**
- (b) Explain Barrier Films from Polymer alloys & Blend. **07**
- Q.5** (a) Explain Thermoplastic Elastomers & Elastomeric Alloys. **07**
- (b) Explain Differential Scanning Calorimetry (DSC). **07**
- OR**
- Q.5** (a) Explain Melt blending process in detail. **07**
- (b) Explain SEM (Scanning Electron Micrographs). **07**
