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**SIXTH SEMESTER  
MID SEMESTER EXAMINATION**

Roll .....

**B.Tech.[EC].  
March-2019**

**Subject: Polymer Blends & Composites (PT-318)**

**Time: 1.5 Hours**

**Max. Marks: 25**

Note: Answer all questions. Assume suitable missing data, if any.

1. Define polymer blends. Discuss in brief the objective of employing polymer blend technology. [3]
2. Discuss the role of polymeric modifier for achieving improvement in the Processability, Impact Strength, flame resistance, Heat resistance and Chemical Resistance of the polymer blends [3]
3. Discuss briefly about the type, properties and applications of ABS/Polycarbonate and PVC/NBR blends. [3]
4. What is reactive compatibilization? What are the advantages of employing reactive compatibilization? [3]
5. Explain the difference between the flow behaviour of Newtonian and non-Newtonian fluid using suitable graphical representation. [3]
6. a) Write a short note on significance of Inter Penetrating Networks in polymer blends.  
b) Mention the limitations of the solubility parameter approach for polymer-polymer compatibility. [1.5+1.5 = 3]
7. a) Explain the advantage and disadvantage of solution mixing technique used for preparing polymer blends.  
b) Explain polymer-polymer miscibility by thermodynamic approach. [2 + 2 = 4]
8. How one can analyse the structure, thermal stability and surface morphology of polymer blend. Explain using suitable example. [3]