Note: Answer 4 question only

Q1: (A) What is the Roller-Die process explain it and sketch the process? (12.5) marks

(B) What is the polymer macro structure of synthetic elastomers? Explain it? (12.5) marks

Q2: (A) what is the method of coagulation of latex explain it briefly? (12.5) marks

(B) what is the types of molecular structure of polymer and explain one of them with example? (12.5) marks

Q3: (A) Give me the chemical structures of the following polymers? (Choose 6 only) (12.5) marks

PVC, PE, DBP, Nylon 6, PS, SBR, Poly imide

(B) What are the steps to product tires? Explain it? (12.5) marks

Q4: (A) What is the polymer properties? Explain it? (12.5) marks

(B) The following data were obtained in a determination of the average M.wof polymers

<table>
<thead>
<tr>
<th>M.w</th>
<th>w. (g)</th>
</tr>
</thead>
<tbody>
<tr>
<td>60</td>
<td>1</td>
</tr>
<tr>
<td>40</td>
<td>2</td>
</tr>
<tr>
<td>20</td>
<td>5</td>
</tr>
<tr>
<td>10</td>
<td>2.5</td>
</tr>
</tbody>
</table>

a- Compute the Mn and Mw?
b- What is the poly dispersity of the polymer and how many molecules are in 1 gram of polymer?

Q5: (A) what is the miscible elastomer blends with explain one of them? (12.5) marks

(B) what is the types of rubber molding with explain one of them? (12.5) marks

GOOD LUCK...