Answer only five questions

Q1: A- Electrospinning technique was a method to fabricated nanopolymeric fibers. At which condition can you think this technique to fabricated Microfibers?
B- What was the difference between Wet Spinning and Dry Spinning in the Manufacturing of fibers? (10 marks)

Q2: A- Aramids fibers exhibit higher tensile strength and thermal resistance than the aliphatic polyamides fibers. Why?
B- Explain briefly how the reaction occurs in the interfacial polymerization? (10 marks)

Q3: A- State the condition of Polymer in each steps of extrusion process of fibers manufacturing?
B- Prove mathematically the large surface area to volume ratio of nanomaterials? (10 marks)

Q4: A- What are the factors that determine the solution conductivity in electrospinning process, Explain these factors and indicate the increase in solution conductivity favors whether the formation of thinner or thicker fibers?
B- State glass fibers types and applications? (10 marks)

Q5: A- Explain Boron fibers properties and usage?
B- State high-performance, synthetic, organic fibers and explain the properties of one of them? (10 marks)

Q6: A- State the most common ways to produce nanofibers?
B- What was the advantages of bicomponent thermal binder fibers? (10 marks)

GOOD LUCK