

**NATIONAL UNIVERSITY OF SCIENCE AND TECHNOLOGY  
DEPARTMENT OF TEXTILE TECHNOLOGY  
END OF SEMESTER EXAMINATIONS DECEMBER 2004**

**NON WOVENS TXT 4124  
TIME: 3 HOURS**

**INSTRUCTIONS**

Answer **FIVE (5)** questions

1. a) Draw a schematic flow diagram of the spunbonding process.  
b) Write short notes on the characteristics and properties of spunbonded webs and their respective applications. (20 marks)
2. Write an essay on “web formation and layering” in the dry-laid manufacturing system. (20 marks)
3. a) Outline the principles involved in “felting”.  
b) Discuss the properties and uses of both natural and synthetic fibres in a wet-laid manufacturing system. (20 marks)
4. With the aid of diagrams, describe the needlepunching process. Discuss the various applications of needle punched products. (20 marks)
5. a) Define the term “chemical bonding”.  
b) Explain the different chemical bonding methods used in consolidating non woven structures. (20 marks)
6. Review the medical applications of non wovens, with particular reference to:  
a) Nonimplantable materials  
b) Healthcare and hygiene (20 marks)
7. Write short notes on any **THREE (3)** processes involved in the wet finishing of non woven bonded fabrics. (20 marks)

**END OF QUESTION PAPER**