A

Ministry of Higher Education&
Scientific Research
University of Technology
Materials Engineering Department

Subject: Fibers Technology
Examiner: Prof.ASS. Dr. Akram R. Jabur & Ass.Lec.Manar Abduljabar
Allowed time: 3 hours

وزارة التعليم العالي والبحث العلمي
الجامعة التكنولوجية
قسم هندسة المواد

Class: 3rd
Signature :
Date: / /2014

Final Examination (2013-2014)

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 stepes of extrution 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.....