

Mansoura University Faculty of Engineering Textile Dept.	Wool Yarns Manufacturing 2011/2012	2 nd year Time:90 min Full mark : (110)
--	---	--

Answer the following questions:

Part 1

- 1-a Explain the following : fibre fineness, crimpness and hydroscopicity.
b-The sorting qualities and its marks on the sheep's fleece.
c-Classify the impurities present in wool fibres and the methods of its removal. (19 marks)
- 2-a Compare between the main principles of opening process in the intermittent and continuous openers of wool fibres.
b-Discuss the principles which affecting the scouring process of wool fibres in the traditional scouring machine. (18 marks)
- 3- On the worsted carding machine, explain the function of each part and determine the actions carried -out on it during the material path through the machine. (18 marks)

Part 2

- 1-State the purpose of wool combing and explain the four combing operations which are performed during the combing cycle on the rectilinear combing machine in worsted spinning. (10 marks)
- 2- a-Mention the main operations which are carried out in roving preparation. State the types of flyer roving frame for produced twisted roving. Describe two examples for the drafting systems of flyer roving frames. (10 marks)
b- In recent years improved drafting systems have been incorporated in the spinning frames. Classify the different spinning drafting systems used in worsted spinning. (10 marks)
- 3- a- Compare between the different types of spinning machines used in worsted spinning in terms of:
-Type of produced yarns
-Principle
-Advantages and disadvantages (15 marks)
- b- Calculate the actual twist (T/m) in ring spinning machine in worsted spinning having the following data:
-Spindle speed = 13500 r.p.m,
-Front rolled diameter (of drafting system) = 25 mm and rotational speed = 172 r.p.m,
-Bobbin diameter = 30 mm. (10 marks)