KHULNA UNIVERSITY OF ENGINEERING & TECHNOLOGY
Department of Textile Engineering
B. Sc. Engineering 4th Year Backlog Examination, 2016
TE4113
(Textile Testing and Quality Control-II)

Time: 3 Hours   Total Marks: 210

N.B.: i) Answer any THREE questions from each section in separate scripts.
ii) Figures in the right margin indicate full marks.

SECTION-A

1(a)   What is Oeko-Tex-100+? State the different categories of textiles according to Oeko-Tex.   17
1(b)   What is WRAP? Write down the WRAP principles.   18

2(a)   What is meant by BAN? Describe the process of BAN for estimation mercerization of the   20
fabric.
2(b)   Discuss a method of estimating available chlorine found in a fabric.   15

3(a)   Define the following terms:-   20
    (i) Air porosity (ii) Water retention (iii) Wet-ability (iv) Shower-Proof and (v) Water-
    Proof.
3(b)   Explain the Bundesmann test for water penetration and absorption of fabric.   15

4(a)   Write short note on flame retardant finish.   08
4(b)   Write about the factors affecting the flame resistance.   10
4(c)   Depict 45° flame test for standard ASTM D-1230-94.   17

SECTION-B

5(a)   What is pilling? Show a pilling test with an established evaluation procedure.   15
5(b)   Write down the demerits of wearer trials and laboratory tests.   15
5(c)   Write the factors affecting abrasion resistance.   05

6(a)   Describe a carpet thickness test with a neat sketch of the tester.   14
6(b)   Show a durability measurement test of a carpet with necessary diagram.   14
6(c)   Write short note on blue wool.   07

7(a)   What is color fastness? Describe a test of colorfastness to light according to an established   10
standard.
7(b)   Discuss the test of color fastness to rubbing mentioning the standard.   10
7(c)   Show different light sources used in textile testing.   08
7(d)   Sketch a hydrostatic head tester.   07

8(a)   What is grab test?   05
8(b)   What is snagging? Show a snagging test with an established evaluation procedure.   15
8(c)   Discuss the procedure of carrying out a crease recovery test.   15

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KHULNA UNIVERSITY OF ENGINEERING & TECHNOLOGY
Department of Textile Engineering
B. Sc. Engineering 4ᵗʰ Year Backlog Examination, 2016
TE 4133
(Technical Textiles)
Time: 3 Hours   Total Marks: 210
N.B.: i) Answer any THREE questions from each section in separate scripts.
ii) Figures in the right margin indicate full marks.

SECTION-A

1(a) What is Technical Textiles? How do technical textiles differ from conventional textiles? 15
1(b) Point out the main categories of technical textiles with their applications. 15
1(c) Mention the ways and techniques to produce technical textile according to textile institute. 05

2(a) Show the flow-chart of non-woven geo-textile manufacturing process. 15
2(b) State the functions of geo-textile. 10
2(c) What is FRC? Mention the applications of FRC. 10

3(a) Define the following terms:- 12
    (i) Acoustics (ii) Sound (iii) Noise.
3(b) What are porous absorbents and panel absorbents? 10
3(c) What are the special uses of acoustic textile? 05
3(d) "Cotton fiber is excellent noise absorbent"–Justify the statement. 08

4(a) Describe the filtration mechanism with figure. 15
4(b) Write down the different configurations of ultra filtration membrane. Why ultra filtration is preferred? 15
4(c) State the mechanism of sound absorption in fibrous materials. 05

SECTION-B

5(a) Classify the medical textiles. 05
5(b) Explain –(i) Sutures (ii) Scan 2 knit (iii) Rip stop Nylon 15
5(c) Briefly discuss the medical textile products. 15

6(a) What is protective clothing? Give five examples with its requirement. 10
6(b) Describe the materials used to make parachute. 15
6(c) Write short notes on: (i) Rain coat and (ii) Gor-tex fabric. 10

7(a) How smart textile works? 10
7(b) Distinguish between smart textiles and intelligent textiles. 15
7(c) List some types smart material used in smart textiles. 10

8(a) What is meant by lamination? What are the methods of lamination? 10
8(b) Differentiate between laminated and bonded fabric. 10
8(c) What are the factors to be considered to evaluate the performance of laminated fabrics? 10
8(d) Write down the advantages and disadvantages of adhesive bonding. 05

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KHULNA UNIVERSITY OF ENGINEERING & TECHNOLOGY
Department of Textile Engineering
B. Sc. Engineering 4th Year Backlog Examination, 2016
IPE 4121
(Industrial Management)

Time: 3 Hours   Total Marks: 210

N.B.: i) Answer any THREE questions from each section in separate scripts.
ii) Figures in the right margin indicate full marks.

SECTION-A

1(a) Define Management. "Management is undoubtedly one of humankind's most important   11
inventions". Do you agree with this statement? Explain your position.

1(b) Define organization. In today's environment which is more important to organizations   12
effectiveness or efficiency? Explain your choice.

1(c) What are matrix structures in organization? Discuss its merits and limitations.   12

2(a) What is meant by span of control? Discuss the factors upon which span of control   12
depends.

2(b) What do you understand by decentralization of management? Discuss its merits and   10
demerits.

2(c) Explain the theory–X and theory –Y regarding human nature and attitude with proper   13
examples.

3(a) What are the functions of a manager? Is mere knowledge of management enough to   12
become a successful manager?

3(b) What is meant by Management Information System (MIS)? What are the components and   13
activities of MIS?

3(c) How will a user be benefited to utilize information from MIS?   10

4(a) Define forecasting. What are the factors to be considered for selecting forecasting   10
method?

4(b) An electrical contractor's records during the last five week's indicate the number of job   12
requests:

Week:	1	2	3	4	5
Requests:	20	21	18	21	22

Predict the number of requests for week 6 using each of these methods:

(i) Naive.

(ii) A four period moving average.

(iii) Exponential smoothing with α =0.30, use 20 for week 2 forecast.

4(c) What is Delphi method? Explain briefly about the steps in forecasting process.   13

SECTION-B

5(a)	Define job evaluation. Explain the point method of job evaluation with suitable example.	15
5(b)	Define business. Write down the advantages of sole proprietorship business.	10
5(c)	What is franchise business? What are the alternate approaches to start a business?	10
6(a)	Define leader and leadership. Describe the flexibility of an authoritarian leader.	11
6(b)	What is meant group dynamics? What is its impact on an industry?	12
6(c)	Write down the differences between recruitment and selection. What are the functions of employment section of the company?	12
7(a)	What is job redesign and job rotation? What are the objectives of job rotation?	11
7(b)	What is cause-effect diagram? Construct a cause-effect diagram for bread production.	12
7(c)	Write short notes on the following lean tools: (i) Just-in –Time (JIT) (ii) Kaizen (iii) Kanban and (iv) PDCA.	12
8(a)	Define TQM. Describe the functions of internal customers for a product of amusement.	10
8(b)	Explain the quality circle with suitable example.	10
8(c)	"Six sigma is a buzz word in business world". Justify the statement by critically giving your opinion.	10
8(d)	Write down the 5W2H questions in respect to TPM.	05

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SECTION-A

1(a) Classify the garments dyeing machine. Which dyeing machine is widely used for garments dyeing and why? Draw this machine and indicate its different parts. 25

1(b) Discuss the advantages of garments dyeing over fabric dyeing method. 10

2(a) Describe the garments dyeing with reactive dyes by the help of pretreatment. 20

2(b) Estimate the fabric consumption/dozen of Men's T-shirt from the following measurement(Measurement in cm) 15

Size	S	M	L	XL	XXL
Ratio	2	3	3	2	2
½ Chest	56	58	60	62	64
Body Length	70	72	74	76	78
Sleeve length	20	22	24	26	28
Hem width	3	3	3	3	3
Rib width	3	3	3	3	3

[GSM=140]

3(a) Calculate the fabric consumption for a basic Men's Long sleeve woven shirt. Consider marker width 55 inch. Assume other parameters and all parameters must be usual. 20

3(b) 7 ply carton per square meter rate is $0.60 where carton dimension is 55cm×35cm×40cm.Now figure out carton cost for 200Pcs. 15

4(a) What is inspection loop? Mention the different steps of inspection in garment factory. 08

4(b) What is DURDO? Write down its importance. 10

4(c) Depict the difference thread consumption system with suitable examples. 17

SECTION-B

5(a) Describe the working procedure of horizontal garments washing machine with neat sketch. 15

5(b) Write down the process sequence of acid wash of 100kg of sweater. 20

6(a) Make a list of the machines that are used in a washing plant.   08

6(b) Describe Desize + Enzyme +Softener wash of 90kg of twill long pant with standard   15
recipe.

6(c) Write short notes on:-   12

(i) Ozone fading (ii) Laser engraving (iii) Sand blasting (iv) Whiskering

7(a) Explain the body heat balance equation.   15

7(b) Define thermoregulation. How human thermo regulating processes work in hot and cold   12
conditions?

7(c) How vapor permeability of textiles can be measured by desiccant method?   08

8(a) List out the materials which are restricted in apparel.   10

8(b) Discuss the test method to determine formaldehyde content in apparels   12

8(c) What are the regulations regarding zipper fasteners to be used in children's apparel?   13
Discuss.

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