# BASICS OF TEXTILE MANUFACTURE-II (SEMESTER - 4)

# **CS/B.Tech (APM)/SEM-4/APM-403/09**



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2.	Reg. No. Signature of the Officer-in-Charge											
	Roll No. of the Candidate											

CS/B.Tech (APM)/SEM-4/APM-403/09

ENGINEERING & MANAGEMENT EXAMINATIONS, JUNE - 2009

BASICS OF TEXTILE MANUFACTURE-II (SEMESTER - 4)

Time: 3 Hours [Full Marks: 70

# **INSTRUCTIONS TO THE CANDIDATES:**

- 1. This Booklet is a Question-cum-Answer Booklet. The Booklet consists of **32 pages**. The questions of this concerned subject commence from Page No. 3.
- 2. a) In **Group A**, Questions are of Multiple Choice type. You have to write the correct choice in the box provided **against each question**.
  - b) For **Groups B** & **C** you have to answer the questions in the space provided marked 'Answer Sheet'. Questions of **Group B** are Short answer type. Questions of **Group C** are Long answer type. Write on both sides of the paper.
- 3. **Fill in your Roll No. in the box** provided as in your Admit Card before answering the questions.
- 4. Read the instructions given inside carefully before answering.
- 5. You should not forget to write the corresponding question numbers while answering.
- 6. Do not write your name or put any special mark in the booklet that may disclose your identity, which will render you liable to disqualification. Any candidate found copying will be subject to Disciplinary Action under the relevant rules.
- 7. Use of Mobile Phone and Programmable Calculator is totally prohibited in the examination hall.
- 8. You should return the booklet to the invigilator at the end of the examination and should not take any page of this booklet with you outside the examination hall, **which will lead to disqualification**.
- 9. Rough work, if necessary is to be done in this booklet only and cross it through.

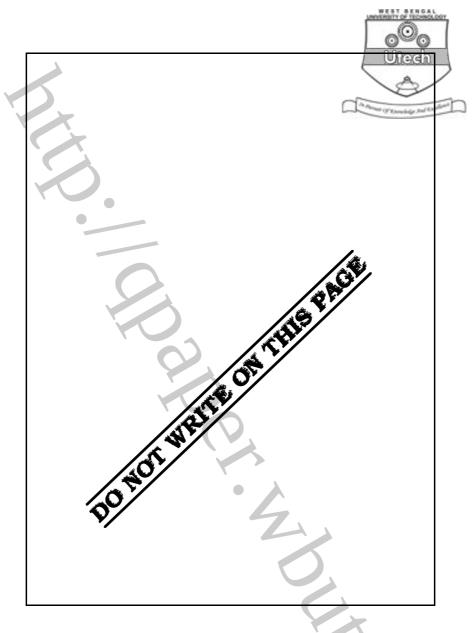
No additional sheets are to be used and no loose paper will be provided

# FOR OFFICE USE / EVALUATION ONLY Marks Obtained Group - A Group - B Group - C Question Number Marks Obtained Obtained

Head-Examiner	Co-Ordinator /	Scrutineer

4561 (10/06)







# **ENGINEERING & MANAGEMENT EXAMINATIONS, JUNE - 2009** BASICS OF TEXTILE MANUFAC

**SEMESTER - 4** 

Time: 3 Hours]	[ Full Marks : 70

# **GROUP - A**

			( Multiple Choice T	ype Q	uestions )	
1.	Choo	se the	e correct alternatives for the follo	owing:		$10 \times 1 = 10$
	i)	A loo	m is a machine having at least			
		a)	3 motions	b)	4 motions	
		c)	5 motions	d)	7 motions.	
	ii)	For c	continuous weaving of the fabric	, weavi	ing machine requires	
		a)	shedding & picking	b)	beat-up	
		c)	take-up	d)	take-up & let-off.	
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	iii)	_	plicated designs like portraits	, land	scape, etc. can be wove	en with the
		shed	ding of			
		a)	Tappet	b)	Dobby	
		c)	Jacquard	d)	None of these.	
	iv)	Weft	bar is due to difference in			
		a)	Material	b)	Colour	
		c)	Count	d)	Pick spacing.	

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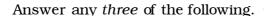
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v)	Wate	er-jet loom is having average pic	king s	peed of	
	a)	44 ft/sec	b)	80 ft/sec	
	c)	100 ft/sec	d)	160 ft/sec.	
vi)	Whi	ch needle is termed as "self-actir	ng" nee	edle ?	
	a)	Bearded needle	b)	Latch needle	
	c)	Compound needle	d)	None of these.	
vii)	On	multi-track circular weft knit	ting n	nachines, the number of tra	acks are
	gene	erally			
	a)	two	b)	three	
	c)	four	d)	six.	
viii)	The	extensibility of which weft knitte	ed fabr	ric is maximum?	
	a)	Single jersey	b)	Rib	
	c)	Interlock	d)	Fleece.	
ix)	Stite	ch density is		5,	
	a)	no. of wales in unit length	b)	no. courses in unit length	
	c)	no. of loops in unit area	d)	none of these.	
x)	Guid	le bars are used on			
	a)	circular weft knitting machine	s		
	b)	flat weft knitting machines			
	c)	warp knitting machines			
	d)	none of these.			



## 5 **GROUP – B**

# ( Short Answer Type Questions )





 $3 \times 5 = 15$ 

- 2. What are the objects of warping and sizing?
- 3. What are the motions of a loom without any of which, weaving is not possible?

  Explain.
- 4. What limitations do non-moven fabrics have ? What are the differences between woven and non-woven fabrics ?
- 5. Show with diagram, the different parts of a latch needle and mention their functions.
- 6. Compare weft knitting and warp knitting.
- 7. Discuss any two faults of woven fabric, their causes and remedies.

# GROUP - C

# (Long Answer Type Questions)

Answer any three of the following.

 $3 \times 15 = 45$ 

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- 8. a) Discuss briefly how the woven fabric is formed.
  - b) Show the passage of material on a loom with a schematic diagram. 5
  - c) Why are heald frames not required in jacquard weaving?
- 9. a) What are the disadvantages of conventional looms?
  - b) What are the objectives of shuttleless looms?
  - c) What are the differences between water-jet loom and air-jet loom?

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10.	a)	What are the important properties of non-woven fabrics?
	b)	What are the different types of chemical and thermal bonding used in non-wover
		fabrics? Discuss the special features of each type.
	c)	How are needle punched non-wovens different from chemical bonded
		non-wovens?
11.	a)	Why has knitting industry experienced a remarkable growth in the recent
		years?
	b)	Explain with suitable diagram the loop forming cycle of a single jersey wef
		knitting machine using latch needle.
	c)	Compare latch and bearded needle.
12.	a)	Explain the term 'needle gaiting'. How is it related to the double jersey wef
		knitting machines?
	b)	What are the different types of warp knitting machines and how do they differ?
	c)	What would be the theoretical production in kg of a 30 inch diameter and
		90 feeder single jersey weft knitting machine, running at 25 rpm and producing
		plain jersey fabric of 2.5 mm stitch length using 30s cotton yarn?
13.	a)	What is dobby and what is jacquard? What are the differences between the two.
		2 + 3
	b)	Discuss the working of any one type of dobby.
	c)	Discuss the working of any one type of jacquard.