KUMARAGURU
college of technology
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B.TECH DEGREE EXAMINATIONS: DEC 2022

(Regulation 2018)

Fifth Semester

TEXTILE TECHNOLOGY

U18TXT5004**:** Knitting Technology

COURSE OUTCOMES

CO1: Describe the concept of knitting.
CO2: Summarize the working Principle of plain, rib and interlock knitting machine.
CO3: Examine the Weft knitted structures.
CO4: Describe the fundamentals and working of warp knitting machine.
CO5: Examine the basic warp knitted structures.

Time: Three Hours   **Maximum Marks: 100**

Answer all the Questions:-
PART A (10 x 2 = 20 Marks)
(Answer not more than 40 words)

1.	Compare and contrast the features of knitted fabrics.	CO1	[K2]
2.	Name the preferable yarn for manufacturing knitted material and write the minimum yarn quality requirements.	CO1	[K1]
3.	Draw a needle gaiting diagram and loop formation technique of an interlock knitting machine.	CO2	[K3]
4.	Write the impact and importance of positive feeders in circular single jersey knitting machines.	CO2	[K2]
5.	In which the knitting machine and knitted structure are used by a double cylinder with a needle transfer principle. How it is differing from other knitted structures?	CO3	[K1]
6.	Outline the influence of the tightness factor in knitted fabrics.	CO3	[K2]
7.	Relate overlap and underlap in relation to guide bar movement in warp knitting.	CO4	[K2]
8.	How the open and closed loops are formed in a warp knitting machine?	CO4	[K1]
9.	Draw any four types of pillar stitch produced in warp knitting using yarn path representation.	CO5	[K3]
10.	What is called seamless garments? Why?	CO5	[K1]

Answer any FIVE Questions:-
PART B (5 x 16 = 80 Marks)
(Answer not more than 400 words)

11.	a)	Explain the knitting terms and its importance with suitable diagrams.	4	CO1	[K$_4$]
	b)	Expalin the loop formation cycle diagrams for latch needle in circular knitting machine and describe its functions.	12	CO1	[K$_3$]
12.	a)	Explain the working principles of the electronic jacquard selection system with a suitable diagram.	8	CO2	[K$_5$]
	b)	Name a knitting method/machine which will be suitable for manufacturing open-width and fully-fashioned garments. Draw the passage of material and explain each part with a suitable diagram of an open-width knitting machine.	8	CO2	[K$_4$]
13.	a)	Identify the three possibilities for producing basic stitches in weft knitting. Draw the CAM which is used for each stitch and brief the principles of each stitch formation with graphical notations.	8	CO3	[K$_3$]
	b)	List the possibilities of major defects in knitted fabrics and suggest remedial action to minimize or rectify the fabric defects.	8	CO3	[K$_4$]
14.	a)	Compare the tricot and raschal warp knitting machine through examples.	6	CO4	[K$_4$]
	b)	Illustrate the working principles of the raschel warp knitting machine with a suitable diagram.	10	CO4	[K$_4$]
15.	a)	Draw the thread path notation of 1 and 1 lap, 2 and 1 lap, 3 and 1 lap, 4 and l lap of tricot structure with guide bar movement and also explain the procedure to attain the structures.	8	CO5	[K$_3$]
	b)	Justify the statement and outline its applications on functional, industrial and technical requirements of warp knitted structure.	8	CO5	[K$_5$]
16.	a)	Copmare the woven and knitted fabric properties in detail.	8	CO1	[K$_4$]
	b)	How knitted fabrics are classified? Analyse the characteristics of basic single jersey and double jersey structures.	8	CO3	[K$_4$]

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