Sea	at No.:	Enrolment No	
		GUJARAT TECHNOLOGICAL UNIVERSITY ME – SEMESTER IV (NEW) – • EXAMINATION – SUMMER 2016	
Su	bject	Code: 2742501 Date:04/05/201	16
_		Name: Advance Topics in Textile Manufacturing 0:30 am to 01:00 pm Total Marks: '	70
	1. 2.	Attempt all questions.	
Q.1		With reference to developments in new fibres, define following terms: (i) General purpose fibres (ii) High performance fibres (iii) High function fibres (iv) High Kansei fibres What are various applications of high tech fibres? Give typical examples of Super Fibres.	14
Q.2	(a)	Write on mathematical relationships between fiber to yarn and yarn to fabric parameters. Also write on its role on detailing the product design process.	07
	(b)	Critically analyse fiber and yarn attributes during the process of selecting them for different fabric varieties. OR	07
	(b)	With reference to thermophysiological wear comfort, discuss insulation and moisture vapour permeability briefly.	07
Q.3	(a)	With reference to artificial fibres by biomimetics, discuss simultaneous polymerization and spinning.	07
	(b)	Define following terms: (i) Smart Textiles (ii) SFIT (iii) Wearable Technologies (iv) Interactive Textiles Which are the research focus areas for power sources for wearable technologies? OR	07
Q.3		What are the most common forms of plasma application in to textile? Write in detail on any one type.	14
Q.4		Write short note on following: (i) Flash Dried Fabrics (ii) Wearable technology (iii) Textile integrated GPS (iv) Tissue Engineering OR	14
Q.4	(a)	Write in short on following: (i) Reflective Technology (ii) "Hydroweave" (iii) "Securus' (iv) "SmartSkin" (v) "3XDry"	07
	(b)	What are the characteristics of major warfare threats? Write in short on role of textiles in personal protection and safety against chemical warfare.	07
Q.5	(a)	Write on different areas of research in sensors and actuators, signal transmission and integrated processes. Define the smart textiles and its applications.	07
	(b)	Write in short on working principle of Phase Change Materials. OR	07
Q.5	(a)	With few examples discuss application of nanotechnology in medical and	07

healthcare textiles.

(b)