GUJARAT TECHNOLOGICAL UNIVERSITY

BE - SEMESTER-V • EXAMINATION – SUMMER 2013

Sul	bject	Code: 152904 Date: 20-05-2013	
Sul	bject	Name: Modern Yarn Production	
Tir	ne: 1	0:30 pm to 01:00 pm Total Marks: 70	
Inst	ructio		
	2.	Attempt all questions. Make suitable assumptions wherever necessary.	
0.1		Figures to the right indicate full marks.	0.5
Q.1	(a) (b)	Compare pin twisting with friction twisting texturing process. With neat sketch describe principle and working of Air jet spinning process.	07 07
Q.2	(a)	Why compact yarn is better than ring spun yarn? Write in detail on com4 spinning process.	07
	(b)	Which factors affects nep formation and smoky yarn generation during manmade fibre and its blends ring spinning process? How? OR	07
	(b)	Explain the factors which control yarn hairiness during manmade fibre and its blends ring spinning process.	07
Q.3	(a)	What is the difference between DREF II and DREF I friction spinning process? State demerit of friction spun yarn.	07
	(b)	Write a note on stuffer box crimping process. OR	07
Q.3	(a)	Explain working of DREF III friction spinning process with neat sketch and also state application of DREF III yarn.	07
	(b)	With neat sketch explain principle of edge crimping process.	07
Q.4		With neat sketch show layout, basic sections and various optional attachments of pacific converter. Also explain variable cut unit and heat stretch unit of the same.	14
		OR	
Q.4		Explain the principle of stretch breaking. Draw schematic diagram of turbo stapler. Discuss in brief effect of temperature and stretch ratio on yarn quality of turbo stapler.	14
Q.5	(a) (b)	Write a note on opening unit and navel of rotor spinning. List out advantages and disadvantages of modern yarn production system over ring spun system. Why open end spinning is known as "break spinning"?	07 07
Q.5	(a)	OR Briefly discuss the effect of rotor groove angle, rotor speed and rotor diameter in rotor spinning system.	07
	(b)	How parallel yarn differs from ring spun and open end yarn? Explain parallel yarn advantages over ring spun yarn.	07
