

**GUJARAT TECHNOLOGICAL UNIVERSITY****BE - SEMESTER-V • EXAMINATION – WINTER • 2014****Subject Code: 152904****Date: 01-12-2014****Subject Name: Modern Yarn Preparation****Time: 10.30 am - 01.00 pm****Total Marks: 70****Instructions:**

1. Attempt all questions.
2. Make suitable assumptions wherever necessary.
3. Figures to the right indicate full marks.

- Q.1** 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**
- Q.2** (a) Write a note on opening unit and navel of rotor spinning. **07**  
(b) Compare pin twisting with friction twisting texturing process. **07**
- OR**
- (b) How parallel yarn differs from ring spun and open end yarn? Explain parallel yarn advantages over ring spun yarn. **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) List out advantages and disadvantages of modern yarn production system over ring spun system. Why open end spinning is known as “break spinning”? **07**
- OR**
- Q.3** (a) With neat sketch describe principle and working of Air jet spinning process. **07**  
(b) Explain the factors which control yarn hairiness during manmade fibre and its blends ring spinning process. **07**
- Q.4** (a) Write a note on stuffer box crimping process. **07**  
(b) Briefly discuss the effect of rotor groove angle, rotor speed and rotor diameter in rotor spinning system. **07**
- OR**
- Q.4** (a) Why compact yarn is better than ring spun yarn? Write in detail on com4 spinning process. **07**  
(b) With neat sketch explain principle of edge crimping process. **07**
- Q.5** (a) List out objects of texturing process. Also classify methods of texturing. **07**  
(b) Discuss in brief effect of temperature and stretch ratio on yarn quality of turbo stapler. **07**
- OR**
- Q.5** (a) With neat sketch classify Air jet texturing process. **07**  
(b) Explain the principle of stretch breaking. Draw schematic diagram of turbo stapler. **07**

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