

GUJARAT TECHNOLOGICAL UNIVERSITY**BE – SEMESTER V • EXAMINATION – WINTER - 2012****Subject code: 152904****Date: 16-01-2013****Subject Name: Modern Yarn Production****Time: 02:30 pm to 05:00 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** (a) Explain in detail principle of operation in Rotor Spinning. **07**
(b) Give the principle of Stretch-Breaking. Draw a schematic diagram of the Turbo Stapler. **07**

- Q.2** (a) Write in brief about Opening unit, Rotor & Navel of Rotor Spinning. **07**
(b) Compare characteristics of Rotor spun and Ring spun yarn. **07**

OR

- (b) Discuss in detail with curves, the effect of temperature and stretch-ratio on yarn quality in heat-stretch zone of a Turbo Stapler. **07**

- Q.3** (a) What do you mean by Friction Spinning? Discuss merits and demerits of it. **07**
(b) Explain in detail operating principle of Wrap spinning. **07**

OR

- Q.3** (a) Explain principle of False Twist Texturing in detail. **07**
(b) Explain in detail Gear Crimping process. **07**

- Q.4** (a) Draw a neat diagram of Courtauld's design Tow-to-Top Converter. **07**
(b) Discuss the factors which should be considered for the control of yarn hairiness during processing of man-mades and its blend on Ring frame. **07**

OR

- Q.4** (a) Discuss the Variable cut unit on Pacific Converter. **07**
Q.4 (b) Discuss the remedial measures to avoid cracker formation at Ring frame. **07**

- Q.5** (a) With neat diagram, explain Air Jet Texturing process. **07**
(b) Explain in detail Stuffer box crimping. **07**

OR

- Q.5** (a) Discuss developments in Air Jet Texturing. **07**
(b) Suggest actions for reducing slub-like thick faults for polyester-cotton blend. **07**
