

**GUJARAT TECHNOLOGICAL UNIVERSITY****BE – SEMESTER V • EXAMINATION – WINTER - 2012****Subject code: 152804****Date: 16-01-2013****Subject Name: Chemical and Physical Analysis of Textiles****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)** With the help of neat sketch, explain briefly the hydraulic bursting strength tester. **07**

**(b)** Explain briefly the Fabric thickness Gauge. **07**

**Q.2 (a)** What is saponification No.? Explain determination of saponification No. **07**

**(b)** Discuss the methods of determining the size content in textile fabrics. Also discuss the size material which is used for yarn sizing. **07**

**OR**

**(b)** Discuss the effect of different chemical reagent on cotton and polyester fibres. **07**

**Q.3 (a)** With the help of neat sketch, explain the principle, construction & working of Pressley bundle fibre strength tester. **07**

**(b)** With the help of neat sketch, explain briefly the Tearing strength Tester. **07**

**OR**

**Q.3 (a)** With the help of neat sketch, explain briefly the Drapemeter. **07**

**(b)** Write a brief note on “Measurement of Threads per inch in woven fabric”. **07**

**Q.4 (a)** With the help of neat sketch, explain any one instrument used to measure twist in yarn. **07**

**(b)** Explain how, yarn unevenness is assessed by visual examination. **07**

**OR**

**Q.4 (a)** Explain briefly the Wet & Dry Bulb hygrometer. **07**

**Q.4 (b)** What do you mean by moisture content & moisture regain. Give the relation between both of them. Explain any one method of measuring moisture in textile material. **07**

**Q.5 (a)** Discuss the different methods used to find the melting point of textile fibres **07**

**(b)** Explain in detail, how determination of the formaldehyde in fabric treated with cross linking agent, is done. **07**

**OR**

**Q.5 (a)** Explain how, quantitative analysis of blends is done. Also describe any one method used for quantitative determination of the blend content of textiles. **07**

**(b)** State the methods employed for moisture removal from fibres. Discuss any two methods in detail. **07**

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