

**GUJARAT TECHNOLOGICAL UNIVERSITY**  
**M. E. - SEMESTER – I • EXAMINATION – WINTER 2012**

**Subject code: 712505N****Date: 16/01/2013****Subject Name: Texturising Technology****Time: 02.30 pm – 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) Which modifications are adopted in texturing machine design to increase production speed? **07**  
(b) State the air mingling yarn channel process factors. Also explain working of heberlein jet. **07**
- Q.2** (a) Explain the physical process phases involved to texture the filament yarn. **07**  
(b) Explain (1) primary and secondary heater process parameter (2) development in heating medium **OR** **07**  
(b) Calculate draw ratio to be set on machine with following data: **07**  
Input yarn – 156d / 24  
Over feed – 14%  
Oil add-on – 2%  
Final yarn – 76d / 24
- Q.3** (a) What are the prime purposes of filament yarn texturing? Classify the texturing processes based on types of texturing yarn with respective applications. **07**  
(b) Write important developments in frictional disc used in twisting unit. **07**  
**OR**
- Q.3** (a) Write a note on creel design and its management on texturing machine. **07**  
(b) Explain important input variables of frictional twisting unit and its effect on yarn quality. **07**
- Q.4** (a) Write shortly on: textured stabilization, and sizing of textured yarn. **07**  
(b) Which parameters of textured yarns should test to understand its behavior in fabric? Discuss the methods and tester use to test it. **07**  
**OR**
- Q.4** (a) Explain in brief on the effects of molecular structure variables on Tg. and Thermal transitions. **07**  
**Q.4** (b) With neat sketch explain principle of air jet texturing involved the tangling effect given by high turbulent air flow acting on filament feed yarn. **07**
- Q.5** (a) Discuss the feed material characteristics which affect the textured yarn properties. **07**  
(b) List out the package build specifications required for high speed off wind in texturing. **07**  
**OR**
- Q.5** (a) Compare functions of sub sections of simultaneous and sequential false twist texturing process. **07**  
(b) Write a note on requirements and application methods of coning oil. **07**

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