

GUJARAT TECHNOLOGICAL UNIVERSITY

B.E. Sem-IV Remedial Examination Nov/ Dec. 2010

Subject code: 142901

Subject Name: Yarn Manufacturing-II

Date: 01 / 12 / 2010

Time: 03.00 pm – 05.30 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 with neat sketch conventional flyer and flyer assembly. **07**
 (b) Discuss various developments in loading arrangement at draw frame. **07**
- Q.2** (a) Discuss the combing cycle of any combing machine. **07**
 (b) What are flyer lead and bobbin lead machines in speed frame? Discuss their advantages and disadvantages. **07**
- OR**
- (b) Explain in brief why even number of passages are required between card and comber. **07**
- Q.3** (a) Describe the features of modern comber. **07**
 (b) How limitations of conventional flyer are overcome in modern flyer? **07**
- OR**
- Q.3** (a) Describe the features of modern draw frames. **07**
 (b) Following data refers to draw frame in a mill: **07**
 Hank of sliver fed = 0.14
 Surface speed of back roller = 100 mts/min
 Surface speed of front roller = 600 mts/min
 Doubling = 6
 Efficiency = 90 %
 Can capacity = 5000 mts
 Deliveries = 2
 Calculate
 (i) Production in terms of kgs/shift/machine.
 (ii) Number of cans required per shift.
- Q.4** (a) Describe briefly the process of lap preparation using sliver lap machine and ribbon lap machine. **07**
 (b) Discuss briefly the problems of (i) drafting wave and (ii) roller nip movement. **07**
- OR**
- Q.4** (a) Explain constructional details of bottom rollers in the conventional drafting system of speed frame with neat sketches. **07**
 (b) Describe various types of gauges used for carrying out settings of comber. **07**
- Q.5** (a) Describe briefly construction of modern top rollers and bottom rollers at draw frame. **07**
 (b) Compare forward feed and backward feed comber briefly. **07**
- OR**
- Q.5** (a) Write the objects of builder mechanism and only draw the diagram of American builder mechanism. **07**
 (b) Following data refers to speed frame: **07**
 Flyer speed = 1000 rpm
 Sliver hank = 0.18
 Roving hank = 1.6
 T.M. = 1.2
 Efficiency = 85 %
 Find (i) draft (ii) Production in pounds/shift/spindle
