

GUJARAT TECHNOLOGICAL UNIVERSITY**B.E. Sem-III Remedial Examination May 2011****Subject code: 132902****Date: 30-05-2011****Subject Name: Yarn Manufacturing****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** (a) State advantages of automatic bale opening machines used in Zone-I. Describe the working of UNifloc machine in detail. **07**
- (b) What are the objectives of a Blow-room? State the sequence of machines used on a modern Blow-room line. **07**

- Q.2** (a) Describe the importance of pre-cleaning devices used in Zone-II. Describe the working of Dual roller cleaner with a neat sketch. **07**
- (b) State the objectives of Ginning. Explain the working of a Roller Gin and discuss why it is used widely in India? **07**

OR

- (b) Explain FQI. Discuss the types of contaminants present in Indian cottons. Mention the dimensions of an Indian bale. **07**

- Q.3** (a) Discuss the importance of air currents in transportation of material in a Blow-room line and its effects on yarn quality. **07**
- (b) Discuss in detail about the opening devices used in Blow-room with neat sketches. **07**

OR

- Q.3** (a) Explain the effect of following on opening and waste extracted at licker-in:- **07**
- a) Increase in licker-in speed
 - b) Wire point density
 - c) Closer setting between licker-in and mote knife / carding bar
- (b) Discuss the important modifications made in the licker-in region of a modern card. **07**

- Q.4** (a) State the objects & methods of grinding. Describe the advantages of Integrated Grinding System used on modern cards. **07**
- (b) Describe the chute feed system with their basic elements. State the advantages and limitations of chute feed devices. **07**

OR

- Q.4** (a) Write briefly on importance of pre-carding and post-carding elements used on high production cards and state their setting with the cylinder. **07**
- (b) Highlight the importance of Auto-levelers used on a card along with their principles. **07**

- Q.5 (a)** A card works with the following:- **07**
Doffer dia. – 27” Hank of lap fed – 0.00154
Doffer speed – 30rpm Waste at card – 4%
Draft at card – 88 Efficiency – 90%
Time – 8 hrs.

Calculate:-

1. Hank of card sliver
 2. Production of card in Kgs.
- (b)** State the effects of the following on card sliver quality & waste **07**
extraction:-
1. Setting between front plate / back plate and cylinder
 2. Setting between licker-in and licker-in under casing
 3. Setting between flat and cylinder

OR

- Q.5 (a)** State the effect of following on quality of carding and waste extracted at **07**
card: -
(i) Metallic clothing, (ii) Stripping, (iii) Heel & toe arrangement
- (b)** Explain following with neat diagrams:- **07**
(i) Tandem carding, (ii) Roller doffing devices
