

GUJARAT TECHNOLOGICAL UNIVERSITY**BE - SEMESTER-IV (NEW) EXAMINATION – WINTER 2017****Subject Code: 2142901****Date: 21/11/2017****Subject Name: Yarn Manufacturing - II****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.

| | | MARKS |
|------------|--|--------------|
| Q.1 | (a) Write the objects of Speed frame. | 03 |
| | (b) Mention the basic difference between the Breaker Draw frame and Finisher Draw frame. | 04 |
| | (c) Describe the sequence of combing operation in rectilinear comber with neat sketches. | 07 |
| Q.2 | (a) Write the objects of Draw frame. | 03 |
| | (b) Name the processes used for comber lap preparation? | 04 |
| | (c) Write short note on: 1) Drafting waves, 2) Roller nip movement. | 07 |
| OR | | |
| | (c) With neat sketch explain the passage of material on Draw frame machine. | 07 |
| Q.3 | (a) Explain construction of flyer. | 03 |
| | (b) Explain Noil extraction theory for back ward feed. | 04 |
| | (c) Give the function of autoleveller in draw frame. Describe the working of autoleveller used in draw frame. | 07 |
| OR | | |
| Q.3 | (a) Write down the formula to calculate the Production of draw frame in Kgs/shift. | 03 |
| | (b) With a suitable sketch explain nipper assembly in combing machine. | 04 |
| | (c) Mention various types of drafting system used in Draw frame. With a suitable diagram explain the 3 over 3 roller drafting system used in Draw frame. | 07 |
| Q.4 | (a) Write the objectives of Combing machine. | 03 |
| | (b) How bobbin lead speed frame is different from flyer lead speed frame? | 04 |
| | (c) Calculate the production of speed frame in Kgs from the following data: 1) Spindle speed = 1050 rpm, 2) Roving hank = 1.20, 3) Twist/inch = 1.14, 4) Number of spindle = 120, 5) Efficiency = 90 %, 6) Working time = 8 hours. | 07 |
| OR | | |
| Q.4 | (a) Name the different types of combing machine. | 03 |
| | (b) Write the function of the following elements used in roving frame: 1) Spacer; 2) Condenser; 3) Flyer tops; 4) Presser arm. | 04 |
| | (c) Explain bobbin building mechanism in speed frame with a suitable diagram. | 07 |
| Q.5 | (a) Why even number of machines are used between card and | 03 |

comber?

- (b) Discuss in brief the important developments in speed frame machine. **04**
- (c) Explain the different parameters influencing the combing operation. **07**

OR

- Q.5**
- (a) Write the function of pressure bar used in drafting system of draw frame machine. **03**
 - (b) Give the advantage and disadvantage of forward feed and backward feed in comber. **04**
 - (c) Explain passage of material on super lap Former. **07**
