

**Third Semester  
Textile Technology  
Scheme July 2008**

**INTRODUCTORY SPINNING (301)**

*Time : Three Hours*

*Maximum Marks : 100*

- Note :** i) Attempt total six questions. Question No. 1 (Objective type) is compulsory. From the remaining questions attempt any five.  
ii) Give sketch wherever necessary.

1. Choose the correct answer : 2 each
- i) Swing door arrangement is provided in
    - (a) Step cleaner
    - (b) Hopper bale breaker
    - (c) Mono cylinder
    - (d) None of the above
  - ii) The purpose of filter bags is to
    - (a) Clean the air
    - (b) Separate fibres and impurities from air
    - (c) Clean the cotton
    - (d) None of the above
  - iii) In carding machine the flat rests on
    - (a) Cylinder bend
    - (b) Flexible bend
    - (c) Cylinder
    - (d) None of the above
  - iv) In a McCarthy gin stripping board strips material from
    - (a) Feed plate
    - (b) Feed bar
    - (c) Beater blade
    - (d) Leather covered roller
  - v) While processing synthetic fibres the mote knife should be
    - (a) Set away from Licker in
    - (b) Set closer to Licker in
    - (c) Doubled
    - (d) Removed from card
2. a) What are the objects of carding? With sketches explain how these objects are achieved? 10
- b) Mention the salient features of modern carding machine. 8

3. a) What are the objects of Ginning? Explain the working of saw gin with neat sketch. 12
- b) Write short notes on maintenance schedule of Blow room line. 6
4. a) Sketch and explain the working of Piano feed regulating motion. 9
- b) With the help of a neat sketch describe the working and principle of spiro cleaner. 9
5. a) Sketch and explain the working of Kirschner beater. 9
- b) Discuss various types of cotton. Name at least five important varieties for spinning medium count along with their effective length and micronaire value. 9
6. a) Calculate the production of a card per hour if the draft between the lap roller and the doffer is 90. The draft between the doffer and the calendar roller is 1.02. Draft between the calendar roller and the coiler calendar roller is 1.05. Hank of the lap is 0.00146. Waste removed during carding amounts to 4% the 27" dia. doffer is running at 12 r.p.m. with an efficiency of 90%. 12
- b) If the hank of the sliver is 0.12 and the actual draft in the machine is 104. Calculate the weight of 1 lap of 40 yards. 6
7. a) Calculate the production of a scutcher in a day of 16 hours if the 9" diameter lap roller is making 7rpm. The hank of each of the 4 laps fed is 0.00146. Mechanical draft in the machine is 3.8. Waste removed accounts to 2.5% efficiency of the machine to be 91%. 10
- b) The trash content in cotton fed to a beater is 4.0% The waste extracted is 2.0% in which 70% is trash. What is the cleaning efficiency of the beater? 8
8. Write short notes on any three of the following: 6 each
- a) Maintenance schedule in carding
- b) Blow room defects and their remedies
- c) Object of mixing and explain Bin mixing and Stack mixing.
- d) Difference between Hopper feeder and Hopper bale breaker
- e) 'Snow ball formation' and 'cloudy web' in a carding machine

