

## TT L222 Yarn Manufacture II

### Major

Date: 01.05.2008

Time: 2 hrs

Total Marks: 35

4×4 = 16

1. Describe the relative merits and demerits of the followings in ring frame;

- i) Double-apron drafting arrangements with long and short lower aprons
- ii) Spring and pneumatic roller weighting systems
- iii) Normal ring and rotating ring
- iv) “Anti-wedge” ring and “low-crown” ring

4×3 = 12

2. With proper schematic diagrams, write short notes on the followings;

- i) Zellweger RINGDATA system
- ii) Principle of air-jet spinning
- iii) Principle of mule spinning

4+3 = 7

3. i) A 120 spindle roving frame, producing roving from 4.87 ktex combed 100% cotton sliver, running at 96% efficiency with empty and full bobbin diameters 50mm and 150mm respectively. Calculate the twist (twist per inch) of roving.

[Consider: The initial and final bobbin speeds are 1318 rpm and 1106 rpm respectively, Break draft is 1.11, Main zone draft is 9.0]

- ii) The recommended range of angle of lead (angle of yarn pull) in a ring frame during the cop build is from 28° to 67°. For a ring of 40 mm diameter, what will be the appropriate bare bobbin and full bobbin diameters?