(c) What is fractionation efficiency of a combing machine ? How is it measured ? 4

SECTION–D

6. (a) Explain the working principle of bobbin leading and flyer leading speedframe. Which one is generally used and why ? 10

(b) What do you mean by Ratching and Hollowing ? 4

(c) Suggest the changes to be done at speedframe, if you need to change roving hank from 0.8 Ne to 1.8 Ne. 6

7. (a) What are the objectives of a ringframe ? Describe the flow of material on a ringframe with a suitable diagram. 10

(b) Explain the building-motion of a ringframe with a diagram. 10

SECTION–E

8. (a) What is Line-Cotor ? Explain its working mechanism. 10

(b) Mention the maintenance schedule carried out in a mill with reference to a winding machine. 10

9. (a) What is dry doubling and wet doubling ? Discuss different styles of threading with reference to the wet doubling process. 10

(b) Discuss different types of faults associated with a plied yarn alongwith their remedies. 10

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Roll No. ..... Total No. of Pages : 4

BT-3/D11 7655

Yarn Manufacture–I (Old) upto Dec.-2010

Paper : TT-205

Time : Three Hours] [Maximum Marks : 100

Note :– Total **FIVE** number of questions are to be attempted. Among them, question number 1 is compulsory and attempt other **FOUR** questions taking **ONE** from each Unit.

SECTION–A

1. (a) Tick the correct answer :

(i) Fine cotton is associated with :

(a) Roller Gin (b) Saw Gin

(ii) 100 Ne cotton yarn essentially involves :

(a) Combing process

(b) Three draw frame passages

(iii) Pianofeed regulating motion controls the regularity of material :

(a) Lengthwise (b) Width wise

(iv) Space in between cylinder and Flat increases at :

(a) The entrance zone

(b) Exit zone of a cylinder and flat

(v) Amount of draft employed by a card is about :

(a) 50 (b) 100

(c) 150

(vi) Number of silver fed to Unilap is :

(a) 24 (b) 28

(c) 32

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(vii) Higher noil % in a comber necessitates :

(a) Forward feed

(b) Backward feed

(viii) The type of hooks in a lap meant for a comber should be :

(a) Leading (b) Trailing

(ix) Number of silver fed to a drawframe processing 100% combed material should be :

(a) 6 (b) 8

(c) 10

(x) Number of drawframe passages following a comber should be :

(a) One (b) Two

(c) Three

(xi) Roller setting of a speedframe is primarily dictated by :

(a) Fibre length (b) Top roll pressure

(c) Linear density of fibre

(xii) Break draft of a ringframe lies in the range of :

(a) 0.1 ~ 0.9 (b) 1.01 ~ 1.5

(c) 2 ~ 3

(xiii) Twist multiplier of 100% polyester hosiery yarn is almost :

(a) 2.0 (b) 3.0

(c) 4.0

(xiv) Direction of twist generally followed in a ring doubler machine is :

(a) S direction (b) Z direction of twist

(xv) Winding process eliminates :

(a) Thin places

(b) Thick places

(c) Neps

(d) Objectionable faults of a yarn 15

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(b) Answer in short (one or two sentences) :

(i) How is the performance of a Blow room line judged ?

(ii) What is the technical importance of the ratio of fan speed and beater rpm in a blow room line ?

(iii) How does increase in lap weight affect comber noil % ?

(iv) What is the function of a false-twister on a speed frame ?

(v) How does mass of a traveller depend on yarn linear density ? 5

SECTION–B

2. (a) Suggest a modern Blowroom line suitable for processing 40's combed yarn. Give their constructional details and working operation. 10

(b) What is the importance of blending ? Discuss commonly used methods of blending alongwith their advantages and disadvantages. 10

3. (a) Explain the theories of carding action on a carding machine. 10

(b) Explain with the help of a diagram some important parameters of metallic card clothing and their influence on carding action. 10

SECTION–C

4. (a) Mention the objectives of a drawframe. How are these achieved on a drawframe ? 10

(b) What is drafting wave ? Discuss different factors introducing irregularities in drafted material. 10

5. (a) Give an estimate of the role of precomb draft and fibre presentation on combing quality. 10

(b) How does combing noil % vary with step gauge and top-comb parameters ? 6

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