

BT-3/D-18

33129

YARN MANUFACTURING-I

Paper-TT-205N

○ Time : Three Hours]

[Maximum Marks : 75

Note : Section-A (Question No. 1) is compulsory. Answer any *one* question from each of the remaining four sections. All questions carry equal marks.

SECTION-A**(Compulsory Question)**

1. (i) Select them in the increasing order of their rotational speed (rpm).
- (a) Licker-in < Doffer < Cylinder
 - (b) Doffer < Cylinder < Licker-in
 - (c) Cylinder < Licker-in < Doffer
 - (d) All with same diameter.
- (ii) In 4 over 4 drafting system, the level of draft in middle zone is around
- (a) Less than 1
 - (b) 1.0
 - (c) 2.0
 - (d) 4.0.

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- (iii) Which type of drafting arrangement is known as "POLAR DRAFTING"?
- (a) 3 over 3 drafting
 - (b) 4 over 4 drafting
 - (c) 3 over 5 drafting
 - (d) 5 over 3 drafting.
- (iv) Which is the hank of a lap ?
- (a) 0.0015
 - (b) 0.015
 - (c) 0.15
 - (d) 1.15.
- (v) The level of draft is around 2.0 between
- (a) Licker-in-Cylinder
 - (b) Licker-in-Feed roller
 - (c) Cylinder-Doffer
 - (d) Doffer-Calender roller.
- (vi) Carding action occur when wire point act
- (a) Point-to-point
 - (b) Point-to-back
 - (c) Back-to-back
 - (d) None of these.
- (vii) Which will be the last machine in a Trutzschler blowroom line
- (a) Multimixer
 - (b) Dustex
 - (c) Blendomat
 - (d) Axiflow.

- (viii) Which of these hooks are formed in a Majority at Carding?
- (a) Leading Hooks
 - (b) Trailing Hooks
 - (c) Double Hooks
 - (d) All equally.
- (ix) On surface of cylinder at card, majority of fibres are
- (a) Hook as trailing
 - (b) Straight
 - (c) Hooks as leading
 - (d) Hooks at both end.
- (x) Autoleveller is used on
- (a) Blowroom
 - (b) Drawframe
 - (c) Flyframe
 - (d) Ring frame.
- (xi) The Stripping action on card takes place between
- (a) Licker-in and cylinder
 - (b) Cylinder and flats
 - (c) Feed roller and licker-in
 - (d) Cylinder and doffer.
- (xii) The majority hooks of a carded sliver removing at which draw frame passage?
- (a) Breaker
 - (b) Finisher
 - (c) Equal at both
 - (d) Not remove at draw frame.

- (xiii) Arrange the Uniflock, Unimix, Uniflex and Unclean blowroom machine in order of their presence in blowroom line
- (a) Uniflex-Unimix-Unclean-Uniflock
 - (b) Uniflock-Unimix-Unclean-Uniflex
 - (c) Uniflock-Unclean-Unimix-Uniflex
 - (c) Uniflex-Unclean-Unimix-Uniflock.
- (xiv) The level of draft at drawframe is
- (a) 1-2
 - (b) 6-8
 - (c) 10-20
 - (d) Around-100.
- (xv) IDF is the concept on
- (a) Blowroom
 - (b) Draw frame
 - (c) Carding
 - (d) Flyframe. (1×15=15)

SECTION-B

2. (a) Why the segregation is done in a spinning mill? Discuss different method of segregation in spinning mill. (7)
- (b) How the mixing is controlled with the help of scientific bale management system. What are its advantages over conventional method. (8)
3. Why blending is necessary. Discuss different methods of blending along with their advantages and disadvantages. Suggest the optimum blending method for polyester/cotton blend. (15)

SECTION-C

4. (a) Explain the working of UNIFLOC with neat and clean diagrams. (9)
- (b) Calculate the production of blowroom if 250 mm shell roller is rotating at 20 rpm and producing a lap of 400 ktex at 90% efficiency. (6)
5. (a) Draw a RIETER blowroom line to process cotton having 5% trash. How this line can be used for cotton of 2% trash? (10)
- (b) What are different types of lap defects? Mention their reasons and remedies. (5)

SECTION-D

6. (a) Give a comparative assessment of lap feed and chute feed system. (8)
- (b) Mention the changes to be done on a carding machine to process polyester fibre in place of cotton fibre. (7)
7. (a) What are the objectives of a carding machine. With a suitable diagram. Explain the working of a modern card and mention the function of individual parts. (10)
- (b) What is heel and toe arrangement? Mention its function. (5)

SECTION-E

8. (a) Mention objective of drawframe. Explain the principle of Ideal drafting. Why practically ideal drafting is not possible? (8)

- (b) Discuss different type of drafting system along with their significance. (7)
9. (a) What is the function of autoleveller. Discuss different type of autoleveller on a draw frame. (8)
- (b) Mention various development occur in drawframe with their significance. (7)
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