

DIPLOMA EXAMINATION IN ENGINEERING/TECHNOLOGY/MANAGEMENT/
COMMERCIAL PRACTICE-APRIL 2018.

YARN FORMATION-I

(Maximum Marks : 100)

Time : 3 Hrs

PART-A
(Maximum marks: 10)

Marks

I. Answer all questions in one or two sentences. Each question carries 2 marks.

1. State any two objectives of mixing.
2. Define cleaning efficiency.
3. Write the functions of Magnetic traps.
4. List the objectives of carding.
5. State the need of auto levelers in cards.

(5X2=10)

PART - B

(Maximum Marks : 30)

II Answer any five of the following questions . Each question carries 6 marks.

1. Define ginning and list the types of gins for different cotton.
2. Classify cleaning points with examples.
3. Explain the working of lap forming unit with suitable sketch.
4. State the functions of flexible bend, cylinder arch and index nut.
5. Write short note on trailing and leading hooks in card sliver.
6. Identify and discuss the developments in condensing region.
7. Define actual draft and state the relation between actual and mechanical draft in card.

[5x6 =30]

PART - C

(Maximum marks : 60)

(Answer one full question from each unit. Each full question carries 15 marks)

UNIT I

- III (a) Describe the working of Auto mixer with sketch. (10)
- (b) List the different methods of mixing and explain about manual mixing. (5)

OR

- IV (a) Demonstrate the various sections of the Blendomat with the help of a diagram. (10)
- (b) List the various organs of the Mixing bale opener. (5)

UNIT- II

- V. a) Describe the working of Axi-flow cleaner with sketch (10)
b) Discuss the lap defects and state their causes (5)

OR

- VI. a) Explain the working of Krischner's beater with sketch (10)
b) State the objectives of cages and lap measuring motion (5)

UNIT- III

- VII. a) List and explain the maintenance operations given to a card (10)
b) State the functions of heal and toe arrangement (5)

OR

- VIII. a) Describe the material passage through a revolving flat carding machine (10)
b) List the different types of waste in carding with normal extraction percentage (5)

UNIT - IV

- IX. a) Draw line sketch of draft gearing of the card and determine the Draft constant (10)

Lap roller wheel	: 48 T	Feed roll wheel	: 16 T
Feed roll plate wheel	: 132 T	Side shaft bevel	: 20 T
Doffer bevel	: 20 T	Doffer wheel	: 192 T
Calendar roll end wheel	: 16 T	Calendar roll off end wheel	: 25 T
Canon shaft wheel	: 15 T	Canon shaft bevel	: 18 T
Upright shaft middle bevel	: 18 T	Upright shaft top bevel	: 18 T
Coiler calendar roll bevel	: 18 T	Lap roller diameter	: 15 CM
Coiler calendar roll diameter	: 5 CM		

- b) Calculate the actual production of a High production card per hour in kg (5)

Doffer speed	: 50 rpm	Doffer diameter	: 28 inches
Tension draft	: 30 %	Hank sliver	: 0.160
Efficiency	: 90 %		

OR

- X. a) Explain the working of Short term auto leveler employed in card (10)
b) Estimate the efficiency of a card (5)

Doffer speed	: 20 rpm	Doffer diameter	: 25 inches
Tension draft	: 1.35	Hank sliver	: 0.145
Actual production/8 hour	: 84 Kgs.		

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