Register No.: [ ]

589

April 2024

Time – Three hours
(Maximum Marks: 100)

[N.B. 1. Answer all questions under Part-A. Each question carries 3 marks.

2. Answer all the questions either (A) or (B) in Part-B. Each question carries 14 marks.]

PART – A

1. Write the N.S.I formula with expansion and its units.
2. What is width of the cane carrier?
3. What is the optimum speed of rotary vacuum filter?
4. Write the expansion of MOL.
5. Define vapour bleeding.
6. Differentiate between spray pump and spray pond.
7. What is crystallizer?
8. Write the power requirement for centrifugal pump.
9. What is the optimum length of grass hopper?
10. Define nozzle pump.

[Turn over.....

PART – B

11. (a) If co-efficient of specific heat of water is 1, co-efficient of specific heat of sugar is 0.301, percentage of water in the sugar solution is 0.85, brix of juice is 15 and brix of water is 40. Calculate the co-efficient of specific heat of sugar solution and water.

(Or)

(b) Derive the formula for mean temperature difference.

12. (a) Calculate MOL storage tank capacity for the data given: Crushing capacity= 3000TCD, lime consumption =0.1% on juice, mixed juice % cane =100.

(Or)

(b) Explain the defecation and sulphitation process.

13. (a) Explain the factors affecting evaporation.

(Or)

(b) Write short notes on (i) Sugar crystal(5) (ii) Curing(5) (iii) False grain and its causes (4).

14. (a) Explain about air cooled and water cooled Xlr.

(Or)

(b) For 2500TCD plant A m/c=25, B m/c= 12, C m/c=10, calculate the continuous type crystallizer capacity.

15. (a) Write about the sugar weighing scale for sugar capacity.

(Or)

(b) Explain the utilization of the by-product of the sugarcane industry.
