

PGIIS-857 B-19
M.Sc. III Semester Degree Examination
SUGAR TECHNOLOGY
Sugar Equipment Capacity
Paper : SCT-3.1

Time : 3 Hours**Maximum Marks : 80***Instructions to Candidates:*

- i) First question is compulsory.
- ii) Answer any four questions in the remaining.

1. Answer any eight questions. (8×2=16)
 - a) What are the types of cane handling equipments used in sugar factory.
 - b) How the Index of preparation is calculated.
 - c) What are the different types of furnaces used in boilers.
 - d) Define NCV & GCV
 - e) How the H.S. of Juice heater calculated.
 - f) Write the use of air pump.
 - g) How the cooling water pipe diameter is calculated.
 - h) Write the reaction of combustion.
 - i) The size of centrifugals is characterized by which dimensions.
 - j) What is the rating of ID & ED Fans.
2.
 - a) Discuss the factors influencing the mill capacity. (10)
 - b) Write a note on preparatory devices. (6)
3.
 - a) Explain the construction of spreader stoker boiler with figure. (10)
 - b) Write a note on combustion of dry bagasse without air. (6)

4. a) Explain the construction of J.H. with neat figure. (10)
b) Write a note on piping & Fluid flow. (6)
 5. a) Discuss the size of vapour pipe & how it calculated. (10)
b) How the diameter of cooling water pipe calculated. (6)
 6. a) Explain the mill hydraulic pressure with figure. (10)
b) Write a note on energy conservation measures. (6)
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[Total No. of Pages : 2

PGIIS-856 B-19
M.Sc. III Semester Degree Examination
SUGAR TECHNOLOGY
Sugar Manufacturing Process-II
Paper : HCT 3.2

Time : 3 Hours

Maximum Marks : 80

Instructions to Candidates:

- i) First question is compulsory.
- ii) Answer any four questions in the remaining.

1. Answer any **eight** questions. **(8×2=16)**
 - a) What are the methods of graining?
 - b) Write the pan boiling scheme.
 - c) What are the different types of Crystallizers used in Sugar Factory?
 - d) What is the main object of crystallization?
 - e) Define centrifugal separation.
 - f) What is the time of crystallization in general practice ?
 - g) How the sugar dust pollution control?
 - h) How the hot water & Steaming arrangements made in sugar curing?
 - i) Write the types of centrifugal machines used.
 - j) Write the standard size of the screen mesh used.
2.
 - a) Discuss the importance of massecuite circulation in vacuum pan. **(10)**
 - b) Write in brief s/v ratio of pan. **(6)**
3.
 - a) Explain the process of 2 massecuite boiling **(10)**
 - b) What are the factors affecting crystal growth? **(6)**

4. a) Explain the construction & operation of batch type centrifugal machine. (10)
b) Write the advantages & disadvantages of Double Curing. (6)
 5. a) Discuss the sugar drying equipments utilization. (10)
b) Write in brief the standard structure of Sugar godown. (6)
 6. a) Explain the scheme of boiling for white sugar manufacture. (10)
b) Write a note on causes of false grain formation. (6)
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