

(Following Paper ID and Roll No. to be filled in your
Answer Books)

Paper ID : 151664

Roll No.

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B.TECH.

Theory Examination (Semester-VI) 2015-16

PROCESS INTEGRATION

Time : 3 Hours

Max. Marks : 100

Note: Attempt any five questions :

1. Attempt the followings :

(5×4=20)

- (a) What do you mean by grand composite curve?
- (b) Discuss the role of thermodynamics laws in process integration.
- (c) Write a short note on grid diagram.
- (d) Explain basic elements of Pinch technology.

2. Attempt the following :

(10×2=20)

- (a) Discuss process integration and its application.

(b) What are the different approaches to process integration?

3. Attempt any two parts of the following : (10×2=20)

(a) Discuss targeting of Heat Exchanger Network.

(b) Discuss Problem table algorithm.

4. Attempt the following : (10×2=20)

(a) Explain design of multiple utilities and pinches.

(b) Give the detail steps for the multiple utilities and pinches.

5. Attempt any two of the following : (10×2=20)

(a) Discuss heat integration in heat engine.

(b) Give the detail procedure for the design of maximum energy recovery.

**6. Write short notes on any four parts of the following:
(4×5=20)**

(a) Distillation column

(b) Data Extraction

- (c) Energy Targeting
- (d) Plant Automation
- (e) Stream Splitting
- (f) HEN

