



Assignment-I

Program Name – B.TECH (Chemical Engg) Semester: 6

Course Name- Energy Resources and Utilization

Last date of submission-12/3/2018

Course Code- ECHE-361

Instructions: 1. Write the response to the assignment in your own handwriting. 2. Submit the response to your HOD within the due date. 3. Write your Name, Programme, and Enrolment no. clearly at the top of the page.

Q.1

- (a) Makes classification of various energy sources.
- (b) Discuss renewable and non-renewable energy sources.

Q.2

- (a) Discuss biogas plants and their operation.
- (b) Explain biomass and its conversion routes to gaseous and liquid fuels.



Assignment-I

Program Name – B.TECH (Chemical Engg) Semester: 6

Course Name- Optimization techniques in Chemical Engg.

Last date of submission-12/3/2018

Course Code- ECHE-362

Instructions: 1. Write the response to the assignment in your own handwriting. 2. Submit the response to your HOD within the due date. 3. Write your Name, Programme, and Enrolment no. clearly at the top of the page.

Q.1

(a) What is optimization? What are constraint variable and unconstraint variable?

(b) Give applications of optimization?

Q.2

(a): Define optimal solution? Name types of dynamic programming

(b) What is duality? Define Raoult's law?



Assignment-I

Program Name – B.TECH (Chemical Engg) , Semester: 6

Course Name- Mass Transfer Operations-II

Last date of submission-12/3/2018

Course Code- ECHE-363

Instructions: 1. Write the response to the assignment in your own handwriting. 2. Submit the response to your HOD within the due date. 3. Write your Name, Programme, and Enrolment no. clearly at the top of the page.

Q.1

- (a). Describe extractive distillation column with proper diagram?
- (b) . Explain flash vaporization with neat and clean diagram?

Q.2

- (a): Explain minimum, total and optimum reflux ratio?
- (b). Differentiate between physical and chemical absorption



Assignment-I

Program Name – B.TECH (Chemical Engg), Semester: 6

Course Name- Process Dynamics and control

Last date of submission-12/3/2018

Course Code- ECHE-364

Instructions: 1. Write the response to the assignment in your own handwriting. 2. Submit the response to your HOD within the due date. 3. Write your Name, Programme, and Enrolment no. clearly at the top of the page.

Q.1

- (a) What is interacting and non-interacting system?
- (b) . Derive expression for dynamic behaviour of purely integrator?

Q.2

- (a). Derive the expression of transfer function for capacity of storage in tank?
- (b) . Explain types of feedback controller?



Assignment-I

Program Name – B.TECH (Chemical Engg), Semester: 6

Course Name- Process Equipment Design

Last date of submission-12/3/2018

Course Code- ECHE-365

Instructions: 1. Write the response to the assignment in your own handwriting. 2. Submit the response to your HOD within the due date. 3. Write your Name, Programme, and Enrolment no. clearly at the top of the page.

Q.1

(a) Define minimum and total reflux? Write the equation for longitudinal and circumferential stress for cylindrical and spherical vessel.

(b) Explain bracket support with proper figure?

Q.2

(a). What is stainless steel and types of stainless steel?

(b) . Explain thermal condition of fuel?