Programme: **B.Tech.(CHEMICAL ENGG)**

Semester: **V**

COMPUTER BASED NUMERICAL METHODS, ECHE-351

Assignment No: II

Due date of submission: **23.10.2017**

Instructions

1. Write the responses to the assignment in your own handwriting.
2. Submit the responses to your HOD within the due date.
3. Write your Name, Programme and Enrolment Number clearly at the top of the page.

Q.1

a) Estimate the missing term in the following table :

x	0	1	2	3	4
f(x)	1	3	9	?	81

b) From the following table evaluate f(3.8) using Newton backward interpolation formula :

x	0	1	2	3	4
f(x)	1.00	1.50	2.20	3.10	4.60

Q.2

a) Apply Runge-Kutta method to find an approximate value of y when x = 0.2, given that dy/dx = x + y, y = 1 when x = 0.

b) Evaluate $\int_0^1 e^{-x^2}\, dx$ using Simpson's one-third rule by taking h = 0.1.

PROGRAMME: B.TECH (CHEMICAL ENGG), 5TH SEM,

CHEMICAL REACTION ENGG.-II, ECHE-353

ASSIGNMENT NO:2

Due date of submission: 23.10.2017

Instructions

1. Write the response to the assignment in your own handwriting.

2. Submit the response to your HOD within the due dates

3. Write your name, programme and enrolment No. clearly at top of the page.

Q.1

A) Explain Michaelis- Menton kinetics.
B) Explain mechanism of solid catalyst reaction.

Q.2

a) Explain porous catalyst and porous diffusion coefficient.
b) What are selection criteria of single and multiple effect reactor system?

PROGRAMME: B.TECH (CHEMICAL ENGG), 5TH,SEM,
MASS TRANSFER OPERATIONS-I, ECHE-352
ASSIGNMENT NO:2
Due date of submission: 23.10.17

Instructions

1. Write the response to the assignment in your own handwriting.
2. Submit the response to your HOD within the due dates
3. Write your name, programme and enrolment No. clearly at top of the page.

Q.1

a) Explain tray drier with proper figure?
b) Describe cooling tower with proper diagram?

Q.2

a) Explain packed tower for absorption and also write the design equation?
b) Define adiabatic operation, non adiabatic operation, saturated vapour-gas mixture, relative saturation, percentage saturation and adiabatic saturation temperature?

PROGRAMME: B.TECH (CHEMICAL ENGG), 5TH SEM,

CHEMICAL TECHNOLOGY-II, ECHE-354

ASSIGNMENT NO:2

Due date of submission: 23.10.17

Instructions

1. Write the response to the assignment in your own handwriting.

2. Submit the response to your HOD within the due dates

3. Write your name, programmed and enrolment No. clearly at top of the page.

Q.1

a) Explain the manufacturing process of caustic soda and chlorine with proper flow sheet?
b) Explain the process of formation of urea with reaction and flow sheet?

Q.2

a) Write the manufacturing process of Phosphate and Triple Superphosphate?
b) Explain the manufacturing process of Nitric acid?

PROGRAMME: B.TECH (CHEMICAL ENGG), 5TH SEM,

PROCESS INSTRUMENTATION, ECHE-355

ASSIGNMENT NO:2

Due date of submission: 23.10.17

Instructions

1.Write the response to the assignment in your own handwriting.

2.Submit the response to your HOD within the due dates

3.Write your name, programmed and enrolment No. clearly at top of the page.

Q.1

a). Give detail about Pitot tube manometer.
b) Differentiate between venturimeter and orifice meter.

Q.2

a) Explain working of thermocouples.
b) Explain working of Rota meter.