

ASSIGNMENT NO:1

B.TECH (CHEMICAL ENGG), 3TH SEM

COURSE: B.TECH (CHEMICAL ENGG), 3TH SEM, **MECHANICAL OPERATION ECHE-232**

ASSIGNMENT NO:1

Due date of submission: 10.11.2016

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.

Q1)

- a) Write short note on gravity settler, sphericity, magnetic separation and jaw crusher?
- b) Explain crushing efficiency? Write the formulae of critical velocity of ball mill?

Q.2)

- a) What is filtration? Why filters are used.
- b) What is screening Effectiveness? What are silos and hoppers?

COURSE: B.TECH (CHEMICAL ENGG), 3TH SEM, FLUID MECHANICS,(EFM-233)

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Q1)

- (a) What is an ideal fluid? State Newton's Law of viscosity.
- (b) Write short note on surface tension, Pascal Law and gauge pressure

Q.2)

- (a) What is Kinematic Viscosity, Specific weight and bulk modulus of elasticity?
- (b) Define Laminar and Turbulent Flow.

COURSE: B.TECH (CHEMICAL ENGG), 3TH SEM, -CHEMICAL PROCESS CALCULATIONS,
(ECHE-231)

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Q1.

a) Write units of volumetric flow rate. term recycle. Amagat's Law. Dalton's Law.

Write dimensions of force.

(B) Define the Roul't's Law ,the term purge. Excess Reactant. normality

Q2.

(a) Define mole fraction. molarity and molality

(b) How many moles of sulphuric acid will contain 64 kg of sulphur. How many Kilograms of carbon are present in 48 kg of methane.

COURSE: B.TECH (CHEMICAL ENGG), 3TH SEM, INDUSTRIAL CHEMISTRY, ECHE-234

Last date of Submission-06/11/2016

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Instruction

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Q1.

- a) Explain the Free radical . Describe the many reaction.
- b).Define the term Crown ethers. Give the many Structure.

Q2

- a) Define the HPLC Spectroscopy with Structure.
- b) What are Wittig reaction.

COURSE: B.TECH (CHEMICAL ENGG), 3TH SEM ,Course: EIS 235, Industrial Sociology (All Branch)

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Due date of submission: 10/11/2016

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4. Each question's part carries 5 marks.

Q1.

- (a) Discuss concept of industrialization.
- (b) Define the factory System.

Q2.

- (a) Discuss various scope of Industrial Sociology.
- (b) Make a comparison between Industrial Sociology and Economics.

COURSE: B.TECH (CHEMICAL ENGG), 3TH SEM, EEM-236,
ENGINEERING MATHEMATICS-III (All Branch)

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Q.1

a) If $f(z)$ is a harmonic function of z , show that

$$\left\{ \frac{\partial}{\partial x} |f(z)| \right\}^2 + \left\{ \frac{\partial}{\partial y} |f(z)| \right\}^2 = |f'(z)|^2$$

b) Use residue calculus to evaluate the following integral. $\int_0^{2\pi} \frac{1}{5 - 4 \sin \theta} d\theta$

Q.2

a) By contour integration, prove that $\int_0^x \frac{\sin mx}{x} dx = \frac{\pi}{2}$

b) fit a straight line to the following data

X	0	1	2	3	4
Y	1.0	2.9	4.8	6.7	8.6