



CHEMICAL ENGINEERING
DEPARTMENT
A S O I T

NEUTRALIZE

A DEPARTMENT E-NEWSLETTER



Principal

Dr. Pina bhatt



Dr. Rajendra Mohite

HOD

EDITORIAL TEAM



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DEPARTMENT ACTIVITIES

“Massive Cleanup Drive by Silver Oak Group of Institutes”

Agenda

Date : 11/09/2018

Timings : 8:00 am to 1:00 pm

No. of faculties involved : 05

No. of Participants : 205

Session Conducted by : Mr.PritamKhandale

Session Conducted under : NEEM Tree Club (NTC) Coordinators:
Mrs.Niharika

Mehta & Mr.PritamKhandale

Chemical Department Head: Dr.Sangeeta
Khandelwal

Location : Vastrapur Lake

Session Brief :

A cleanup drive was organized by NEEM Tree club of Chemical engineering department, Aditya Silver Oak Institute of Technology (ASOIT) in association with Amdavad Municipal Corporation (AMC) on 11 th September 2018 at Vastrapur Lake. The drive was supported by Silver Maple Tree club of Civil engineering department, ASOIT. The idea for the awareness regarding cleanup drive was proposed by Dr. Sangeeta khandelwal, HOD Chemical Engineering Department. This idea was further taken to a practical level by the NEEM club coordinators, Mr.Vijaykumar Singh and Mr. Mohammad Imran. The drive was attended by 205 students of different departments of Silver Oak College of Engineering and Technology (SOCET) and Aditya Silver Oak Institute of Technology (ASOIT). The drive was inaugurated by The Hon'ble Deputy Commissioner of AMC sharply at 7:30 am.

The students were provided with apron, hand gloves, face mask and cap by AMC officers in order to maintain proper hygienic condition. The students were split into 8 groups and sent to work on different routes as decided by AMC officers. The groups were led by Mrs. Dipika Gupta, Mr. Pritam Khandale, Mr. Akash Bhardwaj, Mr. Divhyang Waghela and Mr. Ankit Parmar. The students were assigned a responsibility to clean the roads and pathways of nearby area. The garbage gathered by the students was loaded to the dumping truck by the workers of AMC. The drive was honored by the presence of respective dignitaries of AMC and Silver Oak group of institutes. The presence of Dr. Pina Bhatt, Principal ASOIT motivated the students. The students also communicated with the people in the nearby area to create the awareness about the importance of the cleanliness by proper disposal of the waste. Moreover, the students took the oath about cleanliness and downloaded Swacchata- MoHUA application and promised to convey the message to their relatives and friends. The students were provided a very nice breakfast by the AMC and the program concluded with the vote of thanks.

Titan, Saturn's Largest Moon, has hundreds of times more Oil and Gas than all the known oil and natural gas reserves on Earth.

“Hindi Diwas Celebration”

Agenda

Date : 14/09/2018

Timings : 8:00 am to 10:00 am

No. of faculties involved : 04

No. of Participants : 140

**Session Conducted under : NEEM Tree Club (NTC) Coordinators:
Mrs.Niharika**

Mehta & Mr.PritamKhandale

**Chemical Department Head: Dr.Sangeeta
Khandelwal**

Location : D203

Session Brief :

Hindi Diwas was celebrated with a lot of enthusiasm by NEEM Tree Club of Chemical Engineering Department on 14th September 2018. The festivities of the day started with Hindi poem recitations followed by some small acts and mimicries by various students of the department. The program was attended by around 140 students from 1st, 3rd and 5th semester. A debate competition was also organized on the topic “Is Language a barrier in the way of Communication?” between the students of 1st and 5th semester. The faculties of Chemical Engineering Department esteemed the program with their valuable time and contribution. The program was concluded by Dr. Sangeeta Khandelwal, HOD who explained the importance of language and culture in our routine life. The program concluded with a vote of thanks.

“Engineer’s Day Celebration”

Agenda

Date : 15/09/2018

Timings : 10:00 am to 12:00 am

No. of faculties involved : 03

No. of Participants : 75

**Session Conducted under : NEEM Tree Club (NTC) Coordinators:
Mrs.Niharika**

Mehta & Mr.Pritam Khandale

**Chemical Department Head: Dr.Sangeeta
Khandelwal**

Location : D503

Session Brief :

51st Engineer’s Day was celebrated by NEEM Tree Club of Chemical Engineering Department, Aditya Silver Oak Institute of Technology (ASOIT) on 15th September 2018. Engineer’s Day is observed in India on September 15th every year in the honor of Sir Mokshagundam Visvesvaraya who was born on the day in 1860. He was the chief designer of the flood protection system design built for the city of Hyderabad, as well as the chief engineer responsible for the construction of the Krishna Raja Sagara dam in Mysore which created the largest reservoir in Asia at that time. He received India’s highest honor, the Bharat Ratna, in 1955. The students of Chemical Engineering Department celebrated 51st Engineer’s Day with a great enthusiasm. There were around 75 students from the 1st, 3rd, 5th and 7th semester who were given two activities namely “Elephant Toothpaste Experiment” and “Balloon car making”. The students were motivated by the presence of all the faculties of Chemical Engineering Department. The program started with a brief introduction about the importance of the day delivered by the respected HOD, Dr. Sangeeta Khandelwal. The main feature of the program was that all the activities were explained and performed by the students only. The NEEM club coordinators Mr. Mohammad Imran and Mr. Vijaykumar Singh were present throughout the program for encouraging the students and proper maintenance. The group exhibiting the best performance was given attractive prizes. The students expressed their thoughts at the end of the program and concluded that the activity was a joyful learning for them.

“Adani Port, Mundra Visit”

Date : 20/10/2018 & 21/10/2018
Day : Saturday & Sunday
Nos. of Students : 76
Visit Conducted by : Mr. Pritam Khandale, Ms. Reshma Arable, Mr. Mohammad Imran & Mr. Vijay Singh (Asst. Profs. Chemical Engineering Department)

About Mundra Port

Mundra Port is the largest private port of India located on the north shores of the Gulf of Kutch near Mundra, Kutch district, Gujarat. In 2013-2014, Mundra Port has handled 100 million tonnes of cargo in a year becoming the first Indian port to do so. It also became India's biggest port by cargo handled.

About Visit

The technical visit to Adani Mundra port started at 20th October at 5 am from ASOIT campus. There were two buses containing total 76 students and 4 faculties. The private buses were boarded up to honest restaurant, Morbi. The buses reached honest restaurant at around 7:30 am then from there the buses from Adani were taken up to Mundra port. The buses reached Adani Shantivihar at around 12.45 pm. The students were allocated specific rooms and then lunch was provided later. The multi-purpose terminals contain nine berths of a total 1.8 thousand meters long with alongside depths ranging from 9 to 16.5 meters. Berth 1 is 275 meters long with alongside depth of 15.5 meters and can accommodate vessels to 75 thousand DWT. Berth 2 is 180 meters long with alongside depth of 13 meters and can accommodate vessels to 30 thousand DWT. Accommodating vessels to 60 thousand DWT, Berths 3 and 4 are each 225 meters long; Berth 3 has alongside depth of 14 meters, and Berth 4 has alongside depth of 12 meters. Berths 5 and 6 are each 250 meters long with alongside depth of 14 meters, and both can accommodate vessels to 150 thousand DWT. Berths 7 and 8 are each 175 meters long with alongside depth of 12 meters and can accommodate vessels to 40 thousand DWT. The Barge Berth is 80 meters long with alongside depth of 6 meters and capacity for vessels of 2500 DWT. The Mundra Port offers 21 closed dockside warehouses with capacity for 137 thousand square meters to store wheat, sugar, rice, fertilizer and fertilizer raw materials, and deoiled cakes. The port offers 880 thousand square meters of open storage for steel sheets, coils, plate, clinker, scrap, salt, coke, bentonite and coal. An additional 26 thousand square meters of open storage is available alongside the railway. The port also offers a wheat-cleaning facility with capacity to handle 1200 metric tons per day and a rice-sorting and grading facility that can handle 500 metric tons per day.

Adani Wilmar Limited

Adani Wilmar Limited (AWL) is a joint venture incorporated in January 1999 between Adani Group & Wilmar International Limited - Singapore. Today, AWL owns refineries in 17 strategic locations across India, has 8 crushing units and 18 toll packing units. Cumulatively, this translates to a refining capacity of over 11000 tonnes per day, seed crushing capacity of 7500 tonnes per day and packaging capacity of 9000 tonnes per day. In the refining process, the first step was BLEACHING. Under bleaching, the major impurities were removed from the oil which deteriorated the colour of the oil. The bleached oil was then FILTERED and the heavy impurities were taken out from it. Finally, the strong smell of crude was to be eliminated to get the final product. Thus the DEODERIZATION of oil was done. This process removed all the impurities which were deteriorating the odour of oil. At 250-270 degrees Celsius, the oil was made to pass high vacuum pressure which refined it completely. Fatty acids, which were removed while deodorizing, were sent to the soap industry. Other impurities which were extracted from the crude while bleaching and filtration were sent to incense stick making industries. And thus, no part of the crude was wasted at any of the step in the refining process. After knowing refining, students were taken to the packaging section of the oil industry. Uniform conveyer belt system that connected the whole packaging process into one. The oil bottles were filled and entered into the station where first they were shut with bottle caps. And then they were further passed to put on the Label. Afterwards, a packaging machine packed 36 bottles each at the same time into three different boxes i.e. 12 bottles in one box. Finally, the boxes were sealed with tape and were further sent for storage or export. The whole process was fully automatic and was working on PLCs. The PLCs made the work so easy that not a single human was involved in this process at any instance of time. ADANI WILMAR packaging unit has 6 cold storage units in which the temperature is slowly decreased up to -5 degree Celsius. The fully equipped Adani Wilmar can produce 6000-7000 litres of oil/hour in the industry.

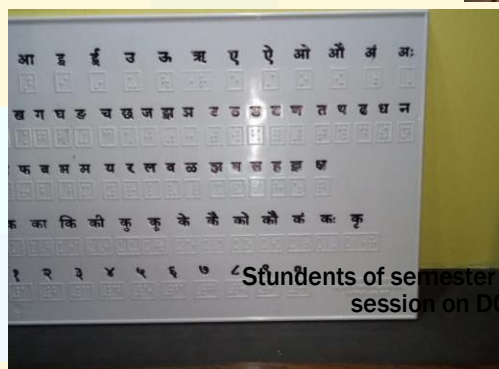
“Knowing without seeing is at the heart of chemistry”



Students of semester 5 attending session on DCS



Mr. Mrityunjay Kumar teaching about DCS



Students of semester 5 attending session on DCS

“Education's purpose is to replace an empty mind with an open one.”
-Malcolm Forbes

Students attending DWGM... used by stud...

EXPERT TALKS

“Expert lecture on plant design and project engineering”

Agenda

Date	: 21/09/2018
Timings	: 10:00 am to 12:00 am
No. of faculties involved	: 03
No. of Participants	: 50 to 70
Session Conducted by	: Mr. Sahabuddin Ahmed
Session Conducted under	: NEEM Tree Club (NTC) Coordinators: Mrs.Niharika Mehta & Mr.PritamKhandale
	Chemical Department Head: Dr.Sangeeta Khandelwal
Location	: Newton Hall
Session Brief	:

An expert talk was organized by chemical engineering department on the topic "Basic Process Design of Plant" on 21st September, 2018. The students of 5th & 7th semester were among the major attendees of the talk. The session was addressed by Mr. Sahabuddin Ahmed (Chief Engineer at PDIL, Vadodara). He has a vast experience of around 17 years in the field of process design and plant operation. He briefed the students about the steps involved and detailed procedure of plant design. In chemical engineering, process design is the choice and sequencing of units for desired physical and chemical transformation of materials. Process design is central to chemical engineering and it can be considered to be the summit of that field, bringing together all of the field's components. Process design can be the design of new facilities or it can be the modification or expansion of existing facilities. The design starts at a conceptual level and ultimately ends in the form of fabrication and construction plans. In either Product or Process Engineering, the primary objective of the design engineer is usually to produce something at the lowest possible cost, with the most commercially desirable attributes, and to do so in a way that meets all applicable laws and standards and ensures safety and protection of society. Another potential situation for process design engineers is the optimization of a process. By its very nature, the objective of improving efficiency (less waste, less raw materials, less energy use, greater production rate, etc.), or improving safety, necessitates the use of creative thinking and engineering tools to satisfy the problem definition and constraints. The session was very useful and informative overall and the students got benefited in terms of technical knowledge and industrial exposure.

“Experiments in the chemical labs of few if any high schools
The few not purpose of education is to turn minds into
philosopher experiments” Sydney J. Harris

EVER WONDERED WHY?

plasma

Superfluid Helium defies gravity and climbs on walls.

DARE TO ANSWER

Instructions :

ANSWERS OF THIS QUIZ WILL BE PUBLISHED IN NEXT EDITION OF NEUTRALIZE.

1-During oxidation process electrons are:

- (A) Lost (B) Gained
(C) Paired up (D) remains same

2-Which one of the following Vitamins is essential for coagulation of Blood?

- (A) K (B) C
(C) A (D) B₁

3-The most electronegative element among the following is

- A.sodium B.bromine
C.fluorine D.oxygen

4-The metallurgical process in which a metal is obtained in a fused state is called

- A.smelting B.roasting
C.calcinations D.froth floatation

5-Bio gas is compressed and used as _____

- a) Motor fuel b) Fuels in vehicles
c) Dog feed d) Cow feed

6-. If the traces of water is left in the vegetable oil then _____ is formed.

- a) Diesel b) Bio diesel
c) Petrol d) Soap

7-Noise and thermal pollution is _____ for fuel cells.

- a) High b) Low
c) Moderate d) Zero

8-A very high frequency wave originating in the nucleus of atom and travelling with the speed of light is the

A.alpha rays B.X-rays

C.beta rays D.gamma rays

9-Chemically dry ice is

A.solid sulphur dioxide B.solid carbon dioxide

C.a mixture of ice and common salt D.ice formed from pure distilled water

10-Of the following different forms of iron carbon is present in minimum amounts in

A.steel B.pig iron

C.cast iron D.wrought iron

11-Chemically, Vitamin 'C' is

A.ascorbic acid B.acetic acid

C.citric acid D.tartaric acid

12-The most abundant source of iron is

A.beans B.eggs

C.green vegetables D.milk

13-The essential element in all organic compound is

A.nitrogen B.sulphur

C.chlorine D.carbon

14-The substance present in good amounts in the sea and administered in certain deficiency diseases is

A.fluorine B.sodium chloride

C.iron D.iodine

15-The atoms of elements in the same group must have the same

A.number of protons B.number of electrons in valence shell

C.number of electrons D.number of neutrons

The rarest naturally-occurring element in the Earth's crust is astatine.

QUESTION QUEST

If you have any Engineering related curious questions, you can mail us on the mentioned Mail-ID. We will shortlist most interesting questions and answer them in the next edition of "NEUTRALIZE".

Mail-ID to send your questions

neutralizenewsletter@gmail.com

"Great minds discuss ideas; average minds discuss events; small minds discuss people."
-Eleanor Roosevelt