RGCEI



(a Litwit CLUB Publication)

Volume.2 Issue 1

01.01.2017 - 15.01.2017

www.rgcetpdy.ac.in/newsletter.html

newsletter@rgcetpdy.ac.in

180 Students from RGCET successfully placed in over 20 companies and still counting.....

The Major agenda of campus placement is to search the talented and qualified students before they complete their graduation. This provides perfect opportunity to students to excel. It is a cumbersome activity and hence majority of the companies find it difficult to trace the right talent. Mainly it is of aptitude and reasoning. RGCET (Rajiv Gandhi College of Engineering and Technology) involve a placement cell which is lead by Mr.Jagatheesh.J. The Cell has been very active ever since its genesis. It trains the students for various skills through Aptitude Tests, Group Discussions, Mock Interviews and Communication Skills etc thereby preparing the students to face the Campus Interviews with confidence.

The vital role of the Cell is to mould the students through vigorous training to face the challenges of future and help them get placed in various

The Cell initiates various workshops, which highlights the opportunities for the students by bringing eminent personalities and trainers from various Institutions. It receives continuous support from professional bodies like NIPM (National Institute of Personal Management) and CII (Confederation of Indian Industry). Apart from training and developing the students, the Cell takes initiative in arranging FDP (Faculty Development Programs) by eminent consultants, to empower the faculty members with the latest trends in order to enhance their skills in innovative methods of teaching.

The Cell's other activities include arranging Industrial Visits and In-plant training. Some of the Companies in which the students have undergone In-plant training are ISRO, BSNL, LENOVO, ACE GLASS CONTAINERS. INDIAN RAILWAYS and **BHARAT** ELECTRONICS. In general,

The Placement is generally composed of the following;

Pre-Placement Talk

A Knowledge about the company will be made during the pre-placement talk. Basically the presentation includes the information like selection procedure, company's milestones, organizational achievements, candidate scope of improvement within the organization if selected, salary, employment benefits. Usually this presentation will end up with question and answer session, students given chance to ask questions about.

Educational qualification

Companies who are interested in campus visit for recruitment purpose will have specific qualification criteria. Qualification criteria include marks or grade range, specific program. Basically company go for specific professional like MCA, MBA to recuite those people because their qualification suitable for their criteria.

Written Test

Qualified students will undergo a test. This is usually a simple aptitude test but depending on company and the position looking for, the difficulty level of the test may be at the higher side.

Group discussion

Most of the companies will have this round as a

filtering round. This round may be or may not be conducted.

A common topic is placed before the group and a formal discussion or knowledge sharing is expected by the judge. Purpose of this round is to check communication skills, etiquette of person, listening ability, convincing power, group leadership, leader or follower and many more thing are evaluated on the basis of requirement or the particular intention of organisation or company. It is very important to keep yourself updated with latest news and discussion topics for appearing in GD round.

Technical Interview

Based on outcome of above said process, students will further undergo a round called technical round. This round evaluates the technical ability of the student. In most of the cases this will be an individual round but it may be grouped with the formal interview.

Formal interview

Final round of the selection process, where the student's stability and his

Books and Journals

(SALARY: 2.6 Lakh Per Annum)

confidence level towards the particular work will be evaluated. The interview focuses on overall personality of the candidate. The more practical application knowledge a candidate has, the more chances of their selection increase. having worked on projects in the industry, internships in relevant companies and

a candidate's chance of

Once the student is selected, prerequisites needed.

Sushmitha.V.S

IV-BME



(SALARY: 2.8 Lakh Per Annum)



Rajeswari.V IV-CSE

IV-CSE









IV-IT



Vishnu.V

Isai Arasi S

Adhiban M IV-ECE



Guneswari K IV-IT IV-IT



Janarthanan.L



Deivakarthik.D





(SALARY

Raniith Benedict Jose, R. IV-EEE



IV-CSE



Parvathy.J.P



IV-ECE



Vidhva.S.G IV-ECE





Priyadharshini.K IV-ECE

Kiruthika. A

IV-ECE



Jayaprakash. A

IV-BME

IV-ECE



Hemasri.K





Balaji.G Lazar Noel



Ramamageshwari M



Gnana Prakash.J IV-ECE



IV-ECE



(SALARY: 5.2 Lakhs Per Annum) **GUVI**



Bhaarrgavee.K.A **IV-CSE**

industry visits to brands in the same sector will enhance

Post-Placement Talk

selection.

he will be given an offer letter. Company's executive provide guidelines may about joining procedure and other

- Antony Tristan, 3rd BME

Student Entrepreneurs of RGCET



*Image: Sasidharan Sundaramoorthy, Hariharassuthan Ragu, GPA Calculator PY University

There is an African proverb that says: "If you think you are too small to make a difference, you haven't spent a night with a mosquito," and these bright young minds are a proof that you are never too young to effect real change. The Zets have built a GPA Calculator that helps to calculate the GPA for Engineering Colleges affliated to Pondicherry University. Our proud undergrads Sasidharan Sundaramoorthy and Hariharassuthan Ragu from 3rd year Computer Science and Engineering have provided a practical, reliable and a useful utility for all the students and the teachers. No more breaking our heads in finding the subject and its corresponding credit when there is GPA Calculator PY University on our mobile phones.

"Our ultimate motive was to develop a free application to calculate the GPA in a most hassle free and convenient manner. Tons of GPA calculators are available online but none are intended for the colleges affliated to Pondicherry University. And Voila! Here we are with GPA Calculator PY University", says the tech savvies of RGCET.

When interrogated to the ZETS, about what and who motivated for this step towards entrepreneurship in this selfie obsessed and fashion addicted modern world, Sasidharan Sundaramoorthy, the founder of ZETS answered "Steve Jobs, I am an atheist but Steve Jobs is my God" while Hariharassuthan Ragu, the co-founder of ZETS said "My long time ambition is to become a CTO".

The Zets have developed a completely free app with no in app purchases and advertisements. "We didn't see App development as a get-rich-quick scheme, we saw it just as a good place to start our career. We built the GPA Calculator during our third Semester. We are currently designing our next app for a well known Company hoping to make waves in this still-new industry". said the tech brainies. Kudos to you bright young entrepreneurs!

*Sasidharan Sundaramoorthy is found as Sasi Zets and Hariharassuthan Ragu is found as Hari Dev on Social Websites.

Find their GPA Calculator at https://play.google.com/store/gpps/details&id=com/sets/gpggglculator

MY COLLEGE

Stepping into a new life where One faces oneself

Some consider everything a race And chase after them all, While others find it difficult To even tie their shoe lace

Many here care for you But you care for a select few

Lots of leisure, lots of pressure
In the midst of which, some search for treasure
The great invention being the headset

Without which no one's heads are fit More sleep, less-work, but still Feeling tired every other minute. Suddenly, when you look back

The poster says"THE END" The 3050 hours of these four years Are just like three hours of a movie

Passing by in the snap of your fingers Leaving behind many a memory that lingers

- Ashna Jabin Jaffer (4th year CSE)

Social Service is our First Love, says the ZARANAs

Some college students spend time worrying about where they should go this weekend, what they should eat tomorrow, what filter to use in their selfies and how they're ever going to pass their upcoming exams. However, here some of RGCET students spend their time thinking nonstop about the nonprofits they've started instead. Zarana Foundation is an officially licensed NGO (Non-Governmental Organization) started by our peers of RGCET who have managed to balance their college work along with the philanthropic endeavors they've initiated.

"Our objectives include organizing programs for women safety and career guidance for children, providing facilities for imparting formal, non-formal and moral education to the children and also coaching facilities for economically backward school children. We are not in for an income. We are in for an outcome is our motto!" says Madhiazhagan, President of Zarana Foundation.

Till date, Zarana Foundation has two events successfully accomplished. The first event was "Our Children" held at the Blind School, Cuddalore on 20th March, 2016. "Seeing them, talking to them, and asking our own questions, that was totally different. Being able to see their everyday lives, where they grew up and meeting their families, it was so personalized. This is what is called amazing", says Archana, the Board Member of Zarana Foundation.



Zarana's next mission was aiding Old Age people and they achieved their second event named "Oldster Welfare" at the Cuddalore Church on 31st July 2016. "One of the most hopeful sights one can see is to watch groups of old people walking together, talking boisterously and showering each other with a barrage of anecdotes. It did told a sordid tale of neglect by families and the drought of care and affection. An unforgettable experience it was!", says Sendhan Amudhan, another Board Member of Zarana Foundation.

"Currently our goal is to help the blind people all around us since India is now home to the world's largest number of blind people. The shortage of donated eyes is becoming a huge problem and we are striving hard to create a revolution and pass a law promoting the donation of eyes", says Gunasundari, The Treasurer of Zarana Foundation

"We are all a bunch of young passionate social workers and there is so much we want to do. But finance is one major hindrance that comes in our way every time. Right now, we rely on funding from friends and family and individuals and like-minded people in the city.", says Dhinesh Kumar, Vice President of Zarana Foundation.

Zarana Foundation is a family with many supportive and benevolent members all over Pondicherry. Here are our Proud RGCETians turned ZARANAs:

CSE-III YR

- MADHIAZHAGAN.K (PRESIDENT)
- DHINESHKUMAR.G (VICE PRESIDENT)
- MOHANRAJ.S
- VISHNUPRIYAN.V
- GOVINDARAJAN.L
- ELANCHEZHIAN.M
- ARCHANA.V (BOARD MEMBER)
- ANJANA.I
- GUNASUNDARI.M (TREASURER)

CSE-IV YEAR

ISAIARASI.S



Hats off to the ZARANAs for their awe-inspiring service to the society.

Zarana is very happy to welcome like minded volunteers to serve for the society. In order to join the Zarana Family, email to zaranafoundation@gmail.com or can be contacted in +918056970337. The official facebook account of Zarana Foundation is https://www.facebook.com/ZaranaFoundation/ and the website link is https://zaranafoundation.wordpress.com/

-Prajisha Jayaprakasan 3rd year CSE

BME-III YR

- SHANMUGHA PRIYAN.R
- REVATHI.M

ECE-III YR

MANIKANDAN.R

ECE-II YR

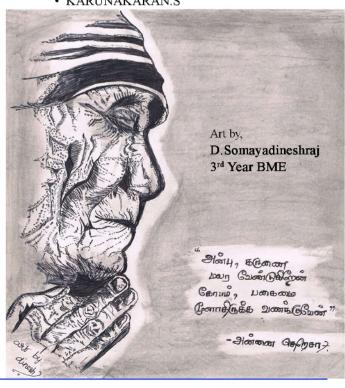
- AMANULLAH.N
- JAYASEELAN.K

EEE-III YR

• SENDHAN AMUDHAN.K(BOARD MEMBER)

MECH-IV YR

KARUNAKARAN.S



IAS COACHING



The Management, Principal, faculties and the students of Electronics & Communications Engineering, Rajiv Gandhi College of Engineering and Technology conducted a programme / discussion regarding the civil service examination on 03-01-2017. The chief guest of the programme, Dr. R. R Dhanapal, Head of Indian Institute of Public Administration (IIPA), addressed the Final year students of all the departments who participated in the programme. The Chief Guest shared his knowledge about Union Public Service Commission (UPSC) examination and mentored regarding the mode of preparation for the same. He further quoted the fact that, book learning is secondary while exposure to this world and gaining knowledge in a practical manner is the essential one. Mrs. B. Shobha, Department Head, Electronics & Communications Engineering, welcomed the gathering with her inspirational speech. The Principal Dr. E. Vijayakrishna Rapaka, honoured the chief guest. The vice principal, Dr. K. Ayyapan delivered the vote of thanks.

Workshop on Ethical Hacking

The Department of Computer Science and Engineering are conducting a National Level Workshop on Ethical Hacking this February 2017.



The workshop also covers topics like WiFi Hacking, Facebook Hacking, Whatsapp Hacking, Credit and Debit Hacking, Windows Password Hacking, Call Spoofing, Email Spoofing, Phising, DOS and Key Logger. Mr. V. Soubbaya, Managing Director, Dynamic Networking Institute, will be the speaker for the workshop. Snacks, Lunch and Participation Certificate will be provided for all the participants. The registration is open for all students and teachers for Rs. 500 per person (Other College Students) and Rs. 400 (Students of RGCET).

In order to register for the workshop, visit http://hakkittoady.16mb.com/ or mail to ehwsrgcet@gmail.com In order to ask your queries on the workshop, contact 9787912877 or 8124051251.

RAISE YOUR VOICE...PLOT A THOUGHT!



"Women Welfare Association" along with "Childrenand Women Healthcare Organisation" conducted a Tamil debate between two groups comprising of five members each. The debate was based on whether "GENDER EQUALITY – IS POSSIBLE OR NOT" dated 5th Jan 2017. The event was held honouring and in the presence of, the famous Tamil speaker Mr.S. RAJA at T.P. Saraswathy Mahal. D Somayadineshraj, a3rdyear Biomedical Engineering student from RGCET, an effective participant of this event said, "I took part in this event and expressed my views stating that 'Gender Equality is not possible', I justified my statement by putting up the problems women face in their day-to-day life and their rights being bounded within a circle".

You REAP What You Sow



Renewable Energy Agency Puducherry (REAP) is a government institution which promotes renewable energy usage. Mr. J. Vinoth Kumar, AP, Department of MCA, RGCET, developed web hosting for REAP. On completion of Web hosting, REAP officials Mr. Kumaresan and Mr. Viswanath thanked RGCET and appreciated on this successful effort. The management and Principal of RGCET congratulates Mr. J. Vinoth Kumar as he did REAP with his sow (i.e., launch of web-portal). For more information, visit: http://reappondy.000webhostapp.com

IPT ON BIOMEDICAL EQUIPMENTS

Five days implant training conducted by central government in Hyderabad was attended by 20 students (3 students from final year, 8 from 3rd year and 9 from 2nd year) from BME department of RGCET. The IPT took place at Advanced Training Institute for Electronics and Process Instrumentation, Ramanthapur, Hyderabad (Telangana). Among various schedules and



programmes offered by the institute, the students of RGCET chose to attend "Operation and Maintenance of Clinical Lab Equipment" for five days, dated 21st to 25th November 2016. The students were taught the principles and functioning of the equipment in the morning session and they were given hands-on practise of those equipment in the afternoon session in the presence of an experienced technician. The participants were shown the complete circuitry, trouble shooting and maintenance of Incubators, Hot Air Oven, Water bath, Microscope, Colorimeter, Spectrometer, Flame Photometer, Conductivity Meter, pH Meter, Electrophoresis, Semi Auto Analyser, Automatic Blood Gas Analyser and BloodCell Counter. When the newsletter team approached the students about this training, they said, "The practical sessions were really useful. We learnt how to trace the circuit from the board. The trainers were very keen on teaching us maintenance and they made sure we really understood. We gained some skills for sure". Final Year BME student Ebanazer Pon Navisha.D, a participant of this IPT, further added "According to me, engineering is not just learning from textbooks and block diagrams present in it. Opportunities like this help us to know how a real equipment is and to practically handle it".

New Year Celebration outskirts



New Year brings joy, celebration and excitement. Hoping that the New Year would bring loads of happiness and success in life.

Few celebrate New Year with family, few with friends and few others spend it away from friends, family and hometown. The RGCETians of girls' hostel came together to bid adieu to the year 2016 and to welcome the year 2017. Initiated with the motivational speech by Dr.V.Dooslin Mercy Bai, HoD Department of BME, the New Year celebration started off with cake cutting. Students from the first year to the final year engaged in various entertaining and competitive events such as dancing, singing and certain other activities, where their talents are displayed.

SAY GOODBYE TO EXAMPHOBIA!

While it is that time of the year when the evenings are Board, the question papers are set following a particular from BME."Our brain is not a computer to longer, the air is chilly and the sunshine a little harsh, it is also that time of the year when you see most religious places flocked with students and parents trying to make the most of their yearlong prayers. Yes, exams in schools and colleges have started and everyone from student counselors to psychologists and also the parents are feeling the heat. Sore eyes, an out-of-the-bed look, a stack of rough notes. sample test papers and stationary spread all over the study table - this is a common site when exams are around the corner. According to the study by the World Health Organization (WHO), India has one of the highest rates of suicides. Each year, approximately 30-40 per 100,000 between15-29 kill themselves. This accounts for about a third of all suicides in the country. Although the reasons are myriad, crumbling under peer and parental pressure to do well in the class X and XII board exams and the everincreasing level of competition are the main reasons why people put their life at risk

"Coming to the stress with the exams, the studentsthink about their results, they feel the pressure to do better than others and to live up to the expectations of their parents. ", says the leading psychologist. "According to TN State

pattern which would help the students learn the subject". suggest the faculties of the Board of Examiners.

The 'E' word is something every student is wary of. As soon as exams begin to loom over their heads, stress levels start increasing. The nearer they get, the more the heartbeat quickens. "To counter the stress, it is important to remember that this is just another exam and there is always a second chance. Set up a routine, make a small to-do list and abide by it as time management is an important. Reviewing your notes daily will help you to organize the material for yourself, and to locate areas where you may have questions", says eminent professors of Engineering from RGCET.

Some of our peers also reveal their secrets they followed in order to stay sane and focusedand bottle up the stress."Binge-watching TV shows and losing myself to Sitcoms* are the ways I deal with exam anxiety." says Niladri Ghosh, from EEE."I picture my study and make a funny story out of it which helps me remember", says Sumitha, from CSE, munching a snicker-bar. "Relax, revise, take a break, chill out and never stockpile photocopies, printouts, notes and textbooks before the exams", says Navisha from

memorize the information in a sequence. Learn it with a proper night-sleep ", says Sowmeya from ECE, Follow this formula: Plan properly, Take a ten-minute me-time, Eat healthy, Have a sound sleep, Do some Sheetkari*, Get a power hug from Amma and own a smile. Moreover, exams are not the end of your life!

*Sitcom: A Situation Comedy

*Sheetkarimeans cooling. This technique is unusual because the inhalation is through the mouth and exhalation though the nostrils.



Prajisha Jayaprakasan,3rd year, CSE

MATHEMATICS

1.) Altitudes of a triangle are concurrent-Prove by vector method (March 2015)

In $\triangle ABC$, let AD, BE be the two altitudes intersecting at O.

In order to prove that the altitudes are concurrent, it is sufficient to prove that CO is \perp^{lar} to AB.

Taking O as the origin. let the position vertors of A. B. C be $\bar{a}, \bar{b}, \bar{c}$ respectively.

Then
$$\overrightarrow{OA} = \overrightarrow{a}, \overrightarrow{OB} = \overrightarrow{b}, \overrightarrow{OC} = \overrightarrow{c}$$

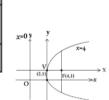
Now AD \bot BC $\Longrightarrow \overrightarrow{OA} \bot \overrightarrow{BC} = 0$
 $\Longrightarrow \overrightarrow{OA} \bot \overrightarrow{BC} = 0$
 $\Longrightarrow \overrightarrow{a} \cdot (\overrightarrow{c} - \overrightarrow{b}) = 0$
 $\Longrightarrow \overrightarrow{a} \cdot \overrightarrow{c} - \overrightarrow{a} \cdot \overrightarrow{b} = 0 \cdots 1$
Now BE \bot CA $\Longrightarrow \overrightarrow{OB} \bot \overrightarrow{CA}$
 $\Longrightarrow \overrightarrow{OB} \bot \overrightarrow{CA} = 0$
 $\Longrightarrow \overrightarrow{b} \cdot (\overrightarrow{a} - \overrightarrow{c}) = 0$
 $\Longrightarrow \overrightarrow{b} \cdot (\overrightarrow{a} - \overrightarrow{c}) = 0$
 $\Longrightarrow \overrightarrow{b} \cdot \overrightarrow{c} = 0 \cdots 2$
Adding $\textcircled{1} & \textcircled{2} \textcircled{2} \textcircled{2} \textcircled{2} \textcircled{2}$



2.) Find the axis, vertex, focus, directrix, length and equation of latus-rectum and draw their graph for the parabolas y2-8x-2y+17=0 (March 2015) (i) $y^2 - 8x - 2y + 17 = 0 \Rightarrow y^2 - 2y = 8x - 17$

 $\Rightarrow y^2 - 2y + 1 = 8x - 17 + 1 \Rightarrow y^2 - 2(y)(1) + 1^2 = 8x - 16$ $\Rightarrow (y-1)^2 = 8(x-2)$ This is of the form $Y^2 = 4aX$ Where X=x-2, Y=y-I and $4a=8 \Rightarrow a=2$:.This parabola open rightward

······································	C)
Refferred to X,Y axes	Refferred to x,y axes
x-2 = X, y-1=Y	x=X+2, $y=Y+1$
Axis of the parabola	$Y=0 \Rightarrow y=0+1=1$
is X-axis, ie., Y=0	y = 1
Vertex is (0,0)	$X=0 \Rightarrow x=0+2=2$
∴X=0, Y=0	$Y=0 \Rightarrow y=0+1=1$
	∴Vertex is (2,1)
Focus is (a,0)=(2,0)	$X=2 \Rightarrow x=2+2=4$
∴X=2, Y=0	$Y=0 \Rightarrow y=0+1=1$
	∴Focus is (4,1)
Eqn. of Directrix	$X=-2 \Rightarrow x=-2+2=0$
$X=-a \Rightarrow X=-2$	$\Rightarrow x = 0$
Eqn. of	$X=2 \Rightarrow x=2+2=4$
Latus-rectum	$\Rightarrow x = 4$
$X=a \Rightarrow X=2$	
Length of Latus-	4a=8
rectum 4a	4a-0



3.) Solve by matrix determinant method (March 2015) 2x + y - z = 4, x + y - 2z = 0, 3x + 2y - 3z = 4The matrix equation is AX=B \Rightarrow $\begin{pmatrix} 2 & 1 & -1 \\ 1 & 1 & -2 \\ 3 & 2 & -3 \end{pmatrix} \begin{pmatrix} x \\ y \\ z \end{pmatrix} = \begin{pmatrix} 4 \\ 0 \\ 4 \end{pmatrix}$

Let
$$\Delta = \begin{bmatrix} 2 & 1 & -1 & | & 2(+1) - 1(+3) - 1(-1) \\ 1 & 1 & -2 & | & 2 - 3 + 1 \\ 2 & 2 & -3 & | & 2 & -3 \end{bmatrix}$$

Let
$$\Delta_z = \begin{bmatrix} 2 & 1 & 4 \\ 1 & 1 & 0 \end{bmatrix} = \begin{bmatrix} 2 & 4 & 4 \\ 1 &$$

Since $\Delta=0$ & $\Delta_x=\Delta y=\Delta z=0$ and one 2×2 minor $\neq 0$ The given system is consistent and it has infinitely

many solutions. Take z=k Now the system has been reduced to two

They are 2x + y = 4+k and x + y = 2k

Let
$$\Delta = \begin{vmatrix} 2 & 1 \\ 1 & 1 \end{vmatrix} = 2 - 1 = 1$$

Let
$$\Delta_X = \begin{vmatrix} 4+k & 1 \\ 2k & 1 \end{vmatrix} = 4+k-2k = 4-k$$

Let $\Delta = \begin{vmatrix} 2 & 4+k \\ 1 & 2k \end{vmatrix} = 4k-4-k = 3k-4$

Let
$$\Delta = \begin{vmatrix} 2 & 4+k \\ 1 & 2k \end{vmatrix} = 4k-4-k=3k-4$$

By Crammer's rule, $x = \frac{\Delta_X}{\Delta}$, $y = \frac{\Delta_Y}{\Delta}$

 $\therefore x = 4 - k$, y = 3k - 4 and z = kSolution $\{4-k, 3k-4, k\}$

PHYSICS

(March 2015)

1.) Comparison of emf and potential difference:

 $\Rightarrow \overrightarrow{BA} \cdot \overrightarrow{OC} = 0$

 $\Rightarrow \overrightarrow{oC} \perp \overrightarrow{AB}$

Hence the three altitudes are congruent.

Potential difference Emf difference of potentials The difference of potentials between the two terminals of a cell between any two points in a closed in an open circuit. circuit. Independent of external resistance Proportional to the resistance of the circuit. between any two points.

3.) Precautions to be taken in radiation laboratories:

(March 2015)

- 1) Radioactive materials are kept in thick-walled lead container.
- 2) Lead aprons and lead gloves are used.
- All radioactive samples are handled by a remote control process.
- 4) A small micro-film badge is always worn.

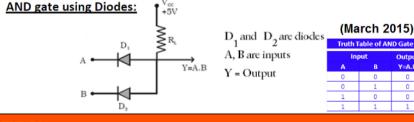
(March 2015) 2.) Applications of superconductors:

- 1. Used as superconducting generators.
- 2. To levitate the trains above its rails.
- To launch satellites into orbits without the use of rockets.
- 4. To build high efficiency ore-separating machines.
- 5. Can be used as transmission lines.
- 6. Can be used as memory or storage elements in computers.

4) Methods of doping a semiconductor:

(March 2015)

- 1) The impurity atoms are added to the semiconductor in its molten state.
- 2) The pure semiconductor is bombarded by ions of impurity atoms.
- The impurity atoms diffuse into the semiconductor, when the semiconductor containing them is heated.



CHEMISTRY

(March 2015)

The movement of sol particles under an applied electric potential is called electrophoresis. If sol particles negatively changed, they migrate toward positive electrode.

If sol particles positively charged, they migrate toward negative electrode. This can be demonstrated by filling As₂S₃ sol

Potential difference of about 100 volts is

applied between two platinum electrodes dipping in deionised water.

It is observed that the level of sol, drops on the negative electrode and rises on positive electrode side.

So As₂S₃ sol particles are negatively charged.

2.) Mention the following for the complex [Co(NH₃)₄Cl₂]NO₂ (v) Co-ordination number (iv) Charge on the Co-ordination sphere

Tetraammine dichloro cobalt (III) Nitrite Co³⁺ (ii)

Ammine, Chloro (or) NH3, Cl

Positive charge complex, (or) CO(NH₁)₂ Cl₂

Write the characteristics of ionic crystals.

(March 2015)

The heat of vapourisation of ionic crystals are high.

The vapour pressure of ionic crystals at ordinary temperature are very low The melting and boiling points of ionic crystals are very high.

Ionic crystals are hard and brittle.

Ionic crystals are insulators in the solid state. Ionic crystals are soluble in water and also in other polar solvents.

Ionic crystals are good conductors when dissolved in water. (any five points)

(March 2015) 3.) Explain Pauling's scale of electronegativity.

(March 2015)

This scale is based on an empirical relation between the bond energy and the electro negativities of bonded atoms. Consider a bond A - B between two dissimilar atoms A and B of a

molecule AB. $E_{A-B} \geq \sqrt{E_{\text{A-A}} \times E_{\text{B-B}}}$

 E_{A-B} = Bond energy of A – B E_{A-A} = Bond energy of A – A E_{B-B} = Bond energy of B - B Difference in electro negativity A $= E_{A-B} - \sqrt{E_{A-A} \times E_{B-B}}$ $\Delta = (x_A - x_B)^2 \ \mathrm{K \ cals}$ $0.208 \sqrt{\Delta}$ $= (X_A - X_B)$ electron volt

> XA = Electronegativity of A XB = Electronegativity of B