

Vigyan Ashram Status Report

Volume 38 Issue 03

March 2020

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DBRT students enjoying bicycle trek



DBRT girl student team on trip to Bhimashankar

A] Bicycle trek to Bhimashankar and Shivneri :

Team of 16 DBRT students & 3 staff members complete

d bicycle trek of Ozar Lenyadri Ganesh Temple, Shivneri Fort and Bhimashankar from 3rd to 6th March. They pedaled 262 Km in 4 days. During their journey, they had visited various enterprises on the way (Bio-fertilizer production unit, goat farm, dairy processing unit, modern agriculture etc). On their way, they were hosted by our DBRT alumni and they shared their experiences with them. Trek tested their team work, physical & mental strength, managerial skill. DBRT girls also took one day picnic to Bhimashankar on 5th March.

During their journey, Students saw one old person met with an accident. He had lost his balance on his two wheeler and become unconscious . Team of students, immediately took him to nearest hospital. It delayed students trip and additional overnight stay in unplanned location. But the elderly person got timely medical help and new thrilling experience for students.

B] Women's Day was celebrated on campus on 8th March. We have got strong & creative team of 25+ ladies' staff-student member. Team decorated 'Dream House' (common seating pagoda) with beautiful *warli* painting. Afterward there was small party for all members on campus.

B] Art Day @ 18th March (Remembering Amma)

Art Day was celebrated on the occasion of 3rd anniversary of Mrs.Mira Kalbag (Amma). This year we learnt skill of photography & publishing photo on Wikimedia. As a precaution of COVID19 outbreak, we kept this event limited to in house staff & students. A day was started with 15 min Annapan meditation followed by sharing memories of Amma. Then we had a training session via video conferencing session by our alumni and professional photographers Mr.Mahesh Lade, Mr.Sanket Kulkarni & Mr.Kshitij Gavandi. They taught us basics of photography and some basic tricks. Afterwards, throughout the day, we had practiced these skills, in small groups while doing a group activity based on 'still photography' of various technologies in campus. These photographs were then published on Wikipedia platform to learn open source publication. Total 131 photographs were published on Wikimedia commons. It was great day for all of to learn new skill with artistic view, while leaving behind day-to-day work activities.



C] 'Advance Electrical Instruments for Electrician' : 2nd batch of training 'Wireman' was organized at Pabal from 14th to 16th March. Training was attended by 45 participants including students , practitioner wiremen, entrepreneurs & teacher. Training was supported by Meggar (I) Pvt Ltd under CSR initiative. We are thankful to Mr.Prakash Shah, Mr.Vikas Chaitanya, Mr.Rajiv Jatkar and Mr.Prasad Kulkarni conducting various training session. M/S Megger has gifted their multimeter to all participants.



Solar Entrepreneurship Training : 2nd batch of Solar EDP started for 1st year B.Voc students of C.T.Bora collage (shirur) was started from 21st March. Due to COVID-19 lockdown we are conducting this training through online video conferencing session. These students will complete their hand on learning session after lockdown. We have 22 students & their teachers register for this program.

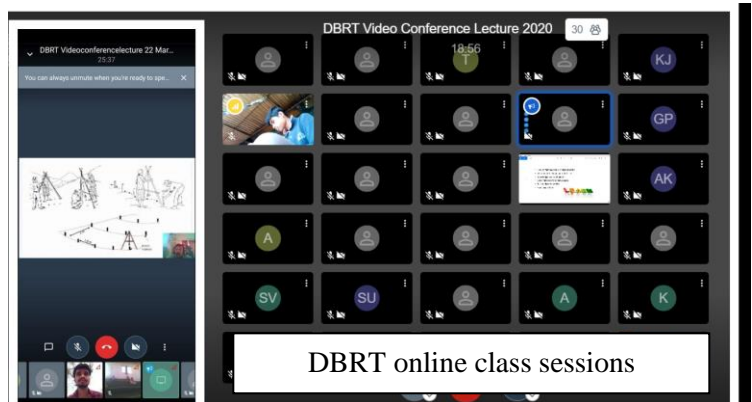
D] DBRT Updates [1st March – 19th March] :-

- Home & Health section : Students learnt science of drying by preparing potato dried flex (12 Kg), Pooran mix (10 Kg) and dried methi or fenugreek vegetable (30 Kg). Total value of community service earned by department while preparing these products were Rs.5930/-.
- Energy & Environment session : Students started work of 'grey water recycling' system installation for ladies hostel (filtration capacity of 5000 lit / day). They learnt basic 'reed bed technology' in grey water filtration and also performed basic plumbing, control panel installation etc activities. They also repaired water pump of campus well, provided inverter supply to polyhouse ventilation fans & repaired wiring connections in H & H section as part of their learning activities.
- Workshop department : Fabricated metal racks, new gate for dairy & signboard frame. They got order of these racks from hardware shop in village (Rs.16930/-). Students also learnt basic of 'wall painting' skills while re-furbishing guest rooms on campus. Total value of their community service was Rs.46,709/- including labor charges of Rs.10249/-
- Agricultural section : students learnt installation of drip irrigation & NFT hydroponics farming system while providing service to farmer at Khairenagar village near Pabal. This farmer is our alumni & conducting trials of precision farming on his 0.5 hector greenhouse. Students also prepared 1.5 ton of silage from green fodder for dairy farm and learned basic first aid while helping veterinary doctor in dairy unit.
- Rang-Panchami was celebrated on campus with full of enthuse & joy on 13th March. Students prepared natural colors from turmeric, red soil etc and used them in dry form to save water.



After Lockdown [20th March – 31st March]

- **Asharam classes were suspended as per directions of Govt of Maharashtra from 20th March.** Students were asked to go back to home. But students from other states are staying on campus. There are 33 students (mainly from Chattisgarh, MP and Tribal part of Maharashtra) staying on Pabal campus. Some of our senior team members are staying on campus & taking care of students & livestock.
- We have started online classes for DBRT course from 23rd March. Every day two classes (10am - 11am and 2pm to 3pm) were conducted via video conferencing. We are using jitsi platform for conducting classes. Monday story session was also conducted via video conferencing. Those on the campus are observing all rules of social distancing .



E] Technology development, DIC and Fab Lab update:

- Aquaponics trial: A fresh trial on aquaponics farming started from 1st of March. We are conducting trial at 2 location viz Pabal & IBT school Chikhali (Pune) with 5000 stacking of 'monosex tilapia' at each location. At Pabal we will be trying to adopt 'bio-floc farming technology' in combination with aquaponics whereas at chikhali we will have normal aquaponics farming setup.
- Sanket started trial of 'Solar electricity powered polyhouse ventilation'. At present two ventilation fans (AC 220, 1.1 W, 7.7 Amps, 7.06 N torque) in polyhouse are consuming around 10 kWh in 8 hr/ day operation. We have shifted these fans on solar inverter (14 kWh) & further they will be fitted with DC motors (180 W, 5.2 Amps, 7.0 N) solar PV supply.
- Prasad completed first working prototype of 'cement bag lifting & stacking' unit. This semi-automatic unit lifts cement bag & stack at desire height. A manual support is provided for horizontal dragging bags toward lifting conveyor arm. We are planning to conduct field trial of this unit for testing user feedback & efficiency.
- Fabrication work started for new prototype of pyrolysis based rotatory kiln reactor for sanitary pad incinerator. Capacity of kiln is of 30 lit with loading capacity 6.8 Kg used sanitary pads or medical waste. Initial trials will be taken on electrically powered heater coils to be replaced afterword with LPG based burners.
- **Organic composting field trials** : Ms Sonal Shinde got final approval & sanction order for her ' recycling of agricultural waste using microbial consortia of organic farming' proposal from Dept of Science and Technology. It was sanctioned under 'Women Scientist Scheme – B' program. During March, Sonal conducted field trial with 6 farmers from Gulani & Wadgaon-peer village for composting of around 2 ton of agro waste.
- **Soil Testing Lab** : 100 samples of soil were analyzed for primary nutrient content. These samples were from Junnar-Ambegaon area farmers & collected by 'Shriram fertilizers' as part of their on-field support program.
- Ms.Priyanka Gharat (BE Elect) & Prinyanka Gawade (Bsc. Biotechnology) joined DIC fellowship program. Ms.Gharat will work 'renewable energy' project under SELCO foundation supported project while Ms.Gawade will work as a DIC intern in soil microbiology lab.
- FAB academy students learnt 3D Scanning and printing, computer-controlled cutting, input device application as a part of their regular assignment & course module. They also learnt operation of 'Shop- bot' tool at COEP Fab lab Pune.
- On 4th March, we organized one day session on 'Rural Technology' in collaboration with C.T.Bora college (Shirur). This program was supported by Savitribai Phule Pune University. Total 66 students from colleges of shirur block participated in for session.



Cement bag lifting machine



Opportunities in 'Rural technology' session

After Lockdown :

- All DIC fellows and Fab Lab members decided to stay back on campus. They joined various forum to find out technological solution to COVID crises.
- Team of Fab Lab succeed in making prototype of 'Face shield' and field tested it with health care workers in Pabal village. They have made face shields using 3D printing, Laser cutting and by DIY methods. Various groups are formed to work on different challenges.
- Those members, who got stuck at home are 'Work from home' and helping in literature survey and content development.
- **Fab School Program** : Dassault systems 'La foundation' conveyed their support to 'Fab School' program. It will be implemented at Mukhai village. We will be implementing various technologies developed at VA on the school campus. Our efforts will be to make the school, Globally connected but Locally self-sufficient, in terms of energy, agriculture and water management. La foundation will also support for making 'Digital Design and DIY kit' of various technologies developed by VA.

F] IBT Update :

IBT schools are entering into annual examination mode. This was the last month of academic calendar of this year. Following learning activities were completed by IBT Schools & respective students as –

- New English School, Marunji, Hinjewadi (Pune) established a waste plastic bag based vertical farming model. This school is in suburb of Pune with very limited agricultural land.
- IBT students Swami Vivekanand Vidyalaya, Asade (Pune) harvested turmeric crop planted on approximately 40 sq. ft area in School. They got yield of around 12 kg. Student further processed it. They chopped it into small pieces & made solar dried turmeric flex.
- Hanuman Madhyamik Vidyalaya, Nimgon-Bhogi (Pune) did electrical fittings of newly constructed computer lab. They installed 12 computers for their lab. Total value of community service Rs. 15,000/-.
- Saradar Raghunatharav Dhavale High school, Kendur, repaired 20 benches in their schools. The total value of student's work was Rs. 2000/-.
- A performance audit of PRAJ Foundation supported Model School project was completed. It's found that performance rating of schools were increase from 58.72 % in June 2019 to 72 % in March 2020. Performance rating is calculated on parameters like students understanding level of particular topic, community service, initiatives of instructor to make IBT session more effective and engaging, community services and school administration support, etc.



Due to COVID19 lockdown, fresh vegetables supply has adversely affected but this garden in Marunji schools is providing organically grown vegetable in village. So far students have harvested vegetables worth Rs.800 and they are expecting few more yield.

IBT Chhattisgarh –

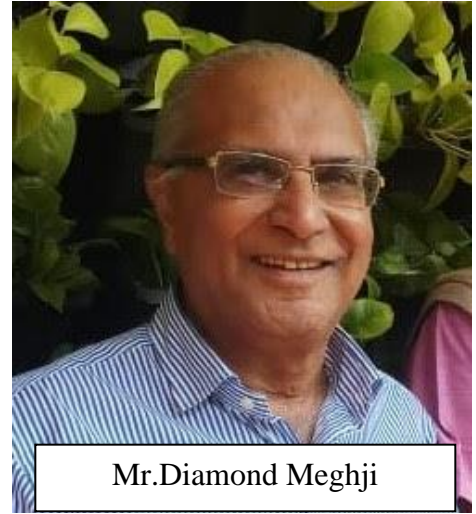
- Sachin visited Dantewada & Bijapur IBT schools during 3rd to 6th March to evaluate IBT programs in porta cabin school. A meeting was conducted with district administration & education department officials for review of progress made and proposal for coming academic year.

G] DIY & Wiki updates :

- Snehal & Pooja helped DIY students from Gram Mangal & Anubhuti School to complete their science project prototypes.
- CIS-A2K gave book scanner for use at DIY LAB. It was installed at lab.
- Three volumes of 'Lokmanya Tilak' comprising total of 1200 pages were scanned for uploading on wiki library.

I] Other tit-bit –

- i) Yogesh gave a talk on , ' **Innovative method of inculcating Spirit of Research** ' at Sir Vithalda Thackersey College of Home Science on 2nd March at Mumbai.
- ii) Yogesh gave a talk on 'Fab Lab for appropriate technologies', at RuTAG conference at IIT, Madras on 12th March.
- iii) **Tribute to Mr.Diamond Meghji** : our long-time supporter & well-wisher passed away with short illness on 7th March at Zurich (Switzerland). Mr.Meghji was supporting VA students with educational scholarship, supported us for building girls hostel at pabal campus, incubating Aquaponics business etc. Its big loss for Vigyan ashram family. We will always remember for his business ideas and enthusiasm to learn new skills. May his soul rest in peace!
- iv) SBI life insurance company Ltd (Mumbai) donated 13 used personal computers to Vigyan ashram on 13th March. These PC's are installed in our computer lab for students use. We have also received 4 computers from Gharda Chemicals for DIY lab as donation. We are thankful to them for their contribution.
- v) Tejas attended training program on 'bio-floc fish farming' organized by ' Sakal Agrowon & APG learning' on 7th & 8th March.
- vi) We are thankful to Vasant and Shanta Patwardhan vishwat Nays (Mrs Varshatai Oak) ; Shrirang Deshingkar, Mr.Roshan Prabhu (Through Maharashtra Foundation), Mr.Sachin Bhalerav, Mr.Jaywant Kulkarni, Mr.Kiran Joshi, Mrs.Meera Karnik, Mrs. Vasanti Vinayak Masurekar, Mr.Shrirang Deshingkar for their financial donation to Vigyan Ashram.
- vii) Weather record – Rainfall of the month -06 mm (Total – 951.28 mm) ,Max temp-43.00 °C, Min Temp – 14.00 °C , Humidity – 49 % , Water height in well – 7.57 Mtr.
- viii) Energy consumption record- Electricity unit – III Phase -935 units , I Phase Export- 302 units, Import- 972 units. DG used – 8.15 Hrs. Quality of power : Number of interruptions :92, Normal voltage : 78.81% No supply : 7.77 % , low voltage : 13.42%, No data: 0 %
- ix) Animal Husbandry section update – Milk production – 288 Kg , Goat- Weight gain (male bucks)- NA, New kids- 0, Poultry Egg production – 183.33 dozens(FCR – 1.69)
- x) Biogas consumption – Dung used- 520 Kg, Gas produced- 2.2 M³) Two wheeler – NA
- xi) www.dsttara.org – 1333 (New visitor –1188 Repeated- 145) , www.vigyanashram.com – 883 (New visitor – 696 Repeated-187)



Data Report: <https://drive.google.com/open?id=1WCjUzyl8Fc3vtoOpqjRcci1RXqsCXPiN>

(Work of VA is supported by Asha for Education, Praj foundation, EATON Foundation, L & T infotech, SPA Education Foundation, Megger (I) Pvt Ltd, Tata Motors, INDUSIA Endowment, UNICEF, Govt of Chhattisgarh, Savitribai Phule Pune University, Suzlon foundation, Dept of Science & Technology, and many individuals and foundations)

Photo Gallery:



Advanced electrical training hands-on session



DBRT student at 'Praga Dairy' visit during cycle trek



IBT students: exhibiting 'water testing' science exhibition



IBT student: ferro-cement made decorative wall-hangs



Rangpanchani festival at Pabal campus



'Women's Day' celebration at Pabal campus

For Regular update:
www.vigyanashram.com

www.facebook.com/vigyan.ashram.pabal ;

www.vigyanashram.blog

Annexure:
Letter to team members -

हे दिवस पण जातील

1 message

Yogesh Kulkarni(Vigyan ashram) <vapabal@gmail.com> Mon, Mar 23, 2020 at 1:27 PM
 To: bhanudasdaundkar75@gmail.com, akshay sawant <akshaysawant245@gmail.com>, Amol Khamkar <amolkhamkar22@gmail.com>, Arti khamkar <artikhhamkar98@gmail.com>, arun dixit <arun.dixit@gmail.com>, Ashok Pandey <ashok24pandey@gmail.com>, Dnyaneshwari Dalvi <dnyaneshwaridalvi123@gmail.com>, Ganesh Pingale <gpingale85@gmail.com>, Harshada raut <harshadraut88@gmail.com>, jadhavpriyanka <jadhavpriyanka74614@gmail.com>, kailas jadhav <ibtvapabal@gmail.com>, karishma gaikwad <karishmagaikwad295@gmail.com>, komal raut <komal.raut284@gmail.com>, komal sambhudhas <sambhudaskomal9933@gmail.com>, Mahendra Sawant <sawantmahendra12014@gmail.com>, mohalkar padamaja <padamajamohalkar2017@gmail.com>, pabalvishal jagtap <pabalvishal@gmail.com>, pooja jadhav <jadhavpooja367@gmail.com>, prasad patil <patilprasad105@gmail.com>, prashant kamble <kambleprashant92@gmail.com>, Ranajeet Shanhbag <vapabaldst@gmail.com>, Reshma Hawaldar <reshmahawaldar9@gmail.com>, Sachin Punekar <ibt@vigyanashram.com>, Sachin Punekar <sachinpunekar01@gmail.com>, Sakore <siddheshsakore@gmail.com>, Shembade <shubham.shembade.1@gmail.com>, snehal gawail <snehalgawail178@gmail.com>, Snehal Patil <patilsnehal2012@gmail.com>, Sonal Shinde <sonal.0.biotech@gmail.com>, Suhas Labade <suhas.labade@yahoo.com>, Supriya Kadam <supriyakadam172@gmail.com>, Tejswini Chaudhari <tejswini chaudhari94@gmail.com>, Va Suyog Warghade <suyogwarghade@gmail.com>, Vaishali Gawandi <vaishali.ibt@gmail.com>

प्रिय साथी

सनम्सकर

करोना च्या साथी मुले सध्या आपण समाज म्हणून एका कठिण परिस्थितीमधून जात आहोत. विद्यार्थ्यांना सुट्ट्या द्याव्या लागल्या आहेत. सरकारी आदेशाने आश्रमातील बाहेरगावाहून ये - जा करणाऱ्या अनेक सहकाऱ्यांना घरून काम करावे लागत आहे. पुढील काही दिवस ही परिस्थिती अशीच राहील असा अंदाज आहे. DBRT तसेच सोलर कोर्स च्या विद्यार्थ्यांसाठी किडिओ कॉन्फरन्सिंग लेक्चर सुरू केले आहेत. जे सहकारी घरून काम करत आहेत त्यांनी आपण काय करायचे याबाबत संभ्रम असण्याची शक्यता आहे.

खरे तर आपल्याला हा वेळ आगदी एक संधी म्हणून उपयोग करून घेता आली पाहिजे. आपल्या प्रत्येकाला हे पंधरा दिवस स्वतःबद्दल व स्वतःच्या कामांबद्दल विचार करायला तसेच पुढचा अभ्यास करायला मिळाले आहेत. त्यामुळे आपण स्वतःचे काम हे स्वतःच ठरवले पाहिजे. पुढील पंधरा दिवसांत आपण काय करणार आहोत याचे नियोजन करणे आवश्यक आहे. या नियोजनामध्ये आपण कुठले वाचन करायचे आहे, कुठली नवीन माहिती मिळवायची आहे, याचे नियोजन केले पाहिजे. आश्रमा बद्दल व तुमच्या करिअरबाबत तुमचे नक्कीच काहीतरी स्वप्न असणार आहे. आश्रमात भविष्यामध्ये काय केले पाहिजे, आश्रमाची स्वरूप कसे असावे, तसेच तुमच्या करिअरची दिशा कशी असावी ? तुमचा करिअर चा road map कसा असावा ? याबाबत तुम्ही नक्की विचार करायला हवा.

मला वाटते या पंधरा दिवसात भविष्यामध्ये तुमचे स्वतःचे व विज्ञान आश्रमाचे पुढच्या वाटचालीसाठी चे रोड मॅप बनण्यासाठीची आवश्यक माहिती आपण मिळवली पाहिजे. उदा. नविन प्रकल्प, नविन कोर्स, नविन Strategy इ.

आपल्या कामामध्ये आपण जर कुठे कमी पडत असू तर आपण अद्यावत होण्याचा प्रयत्न करायला हवा. आवश्यक तो अभ्यास आपण केला पाहिजे. मिळालेला वेळ ही सुट्टी नसून स्वाध्याय (स्व+ध्यास) साठी मिळालेली संधी आहे.

करोनामुळे भविष्यातील ब-याच गोष्टी बदलणार आहेत. त्यातील एक म्हणजे ऑनलाईन शिकणे व शिकवणे, मिरिंग online घेणे इ. सुदैवाने आपण हे आता करत आहोत. मात्र आता ते अधिक परिणामकारक पणे करायला हवे आहे. आपल्याला या नव्या परिस्थितीमध्ये ऑनलाईन कसे शिकवायचे ? त्यात मुलांना प्रात्यक्षिक करणाऱ्या संधी कशी द्यायची ? त्यांचे प्रकल्प कसे करून घ्यावे हे सर्व शिकायला जाणार आहे. DBRT च्या सर्व शिक्षकांनी सर्व विषयांची किडिओ कॉन्फरन्सिंग लेक्चर उपस्थित रहावे. उद्या तुम्हाला सुद्धा परिणामकारक पणे असे लेक्चर घ्यायला आले पाहिजे. व आपली तयारी असली पाहिजे. DBRT students चे ब्लॉग चांगले होण्यासाठी शिक्षकांनी, विद्यार्थ्यां बरोबर काम करण्याची हीच वेळ आहे.

आश्रमातील काही सहकारी हे विविध कारणाने घरी गेलेली नाहीत. ते आश्रमात निवासी आहेत. त्यांचे या परिस्थितीमध्ये योगदान फार मोठे आहे. त्यांच्यामुळे DBRT चे, जे विद्यार्थी घरी जाऊ शकत नाहीत, त्यांना आधार मिळत आहे. खरतर घाबरण्याचे कारण नाही. मात्र आगदी गाभीरी राहून पण चालणार नाही. म्हणून काही सूचना या वारंवार दिल्या जात आहेत.

5/1/2020

Gmail - हे दिवस पण जातील

Whatsapp, News मुळे तर उगीचच अधिक काळजी वाटत आहे व वाढत आहे. काहीजणांच्या घरून गावी परत येण्याचा आग्रह होत असेल. मात्र या परिस्थितीत सरकारने शक्य तेवढा प्रवास टाळण्यास सांगितले आहे. त्यामुळेच रेल्वे व एस्टी बंद केले आहेत. सरकारचा उद्देश हा लोकांनी मूळ गावी जाऊन करोनाचा प्रसार हा इतर ठिकाणी होऊ नये असा आहे. त्यामुळे आपल्यासाठी आपल्या घरच्यांच्या स्वास्थ्यासाठी, सध्यातरी आपण जिथे आहोत तेथे सरकारने दिलेल्या सूचनांचे पालन करणे फायद्याचे आहे.

विज्ञान आश्रम हे आश्रमात काम करणाऱ्यांचे घरच आहे. त्यामुळे एक कुटुंब म्हणून आश्रमातील सर्वांनी एकमेकांना मदत करत आनंदाने या करोनाकाळात काम करावे. DIC फेले नी आपल्या प्रोजेक्टचे ड्राईंग, ग्राफिक डिझाइन, Solidworks यामध्ये आपल्या प्रकल्पाचे काम पूर्ण करावे. आपला ब्लॉग हा सर्वोत्तम पूर्ण असेल हे बघावे. ब्लॉग वाचून आपल्याला अनेक लोक टेक्नॉलॉजी बाबत विचारणा करत आहेत. त्यामुळे तुमचे काम इतरांना माहित होणार आहे. तुमचा ब्लॉग ही तुमची पर्सनॅलिटी दर्शवतो. त्यामुळे ब्लॉग वर विशेष लक्ष द्यावे. ज्या सहकाऱ्यांना इतर वेळी, इतर महत्त्वाच्या कामामुळे, ब्लॉग योग्य प्रकारे लिहायला वेळ मिळाला नव्हता. त्यांनी या संधी चा उपयोग करावा.

1665 झाली युरोप मध्ये प्लेगची साथ आली होती. त्यावेळी केंब्रिज युनिव्हर्सिटी काही काळ बंद होती. त्यामुळे न्युटनला त्याच्या गावी परत यावे लागले. तो गावी असतानाच (सफरचंद झाडावरून खाली त्याची गोष्ट) त्याला ग्रॅव्हिटी चा शोध लागला. इतिहासाची पुनरावृत्ती होऊ शकते. व आपल्या कोणाच्याही बाबतीत असे घडू शकते. मी या बाबतीत फार अशावादी आहे.

आपनी आल्यावर काही जण घाबरतात, हात-पाय गाळून बसतात. काही संधीचा गैरफायदा घेतात. तर काही आलेल्या आपत्तीवर मार्ग कसा काढायचा ? यावर आपली शक्ती व बुद्धी लावतात. प्रज्ञेने व सेहलने बनवलेले मार्क हे आपत्तीवर उत्तर शोधण्याचे प्रयत्न आहेत. आपले ज्ञान व बुद्धी हुशारी, कौशल्य हे अशा प्रसंगी वापरणे हे शौर्यचें काम आहे. एखादी आपत्ती पण इष्टापत्ती होऊ शकते.

आश्रमातील आपल्या सर्वांना प्राप्त परिस्थितीमध्ये सज्जनशील व जबाबदार नागरिक बनण्याची व चांगला संशोधक, चांगला अभियंता असल्याचे सिद्ध करण्याची संधी आपल्याला मिळाली आहे.

आपण सर्वजण या परीक्षेला खरे उतराल याची खात्री आहे.

आपला

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