

**Government Engineering college Valsad**  
**Industrial hackathon details 2019-20**

Sr. No	Problem Statement	Name of the Industry / Organisation	Contact Detail of industry/organisation Mentor (external mentor)	Contact Detail of industry/organisation Co-Mentor	Contact Detail of institute Mentor	Concern Branch of the Institute
1	Constant increasing legacy waste from daily usage. Around 35 TPD of waste (Dry/Wet waste) is being generated in the city on average and there is already 25000 Tons of waste on landfill site. Some of the organic waste is being processed in OWC Plant and compost pit.	Valsad Nagarpalika	Name:- Shri J U Vasava (Chief officer nagarpalika valsad).	Shri Kantibhai Patel	Name:- Dipendrasingh Parmar	Electrical
2	Automatic Meter reading and billing to issue monthly billing instead of bimonthly billing.	DGVCL Valsad	Shri. P. G. Patel	M S Jaitley	Name:- Dipendrasingh Parmar	Electrical
3	Problem Definition Statement: Reduce Wastage of Lighting System in small and Medium Scale Industries.	Dynamic Consultant	Shri Bharat Patel		K L Mokariya	Electrical
4	Measuring of peak load ampere at distribution transformer for balancing of load and their by reduction of distribution losses	DGVCL Valsad	Shri. P. G. Patel	M S Jaitley	Shri J A Jadav,	Electrical
5	To design best APFC with proper algorithm for 3-phase motor	Shri Ram Electricals	Shri Nishant Parvadia		1 K L Mokariya 2 N I Patel	Electrical
6	One serious drawback to solar energy is its intermittent availability (like On-grid, Off-grid, Hybrid System etc.) During optimally sunny conditions energy production is high, but as the sun sets and darkness falls, production falls to zero. The question remains, how do we best store the energy we produce during the day for use later on cloudy days or overnight? Some current methods of storage have drawbacks. They use costly materials, provide inadequate storage, have low power densities, or involve overly complicated processes to produce electricity. While solar energy offers a long-term sustainable energy source, the new solutions worked out in this domain is always welcomed.	Navi Energy Surat	Soham Hirpara	Kishan Thumar	1 K L Mokariya 2 J B Patel	Electrical

7	While operating star-delta starter it is found that the cost of timer for the presently used starter is very high. It is needed to incorporate a timer which gives cost effective solution and while operation from star to delta mode if rated load on motor decreases to 40% or less then again it should come back to star mode. Sensor with proper control is desired.	OUM ELECMECH PVT LTD	Hemin C Modi		1 K L Mokariya 2 A N Parmar	Electrical
8	In distribution transformer only fuses are provided for protection. It is needed to strenghen protection while fitting appropriate relay and protection system with taking care of consumer leakage current and improvement of power factor.	Power Control Industries	Shri Sanket Desai	Shri Kantibhai Patel	Shri J A Jadav, Shri J D Patel	Electrical
9	Currently the underground sewerage capacity is 11MLD (Million liters per day) and if it increases to 28MLD then it would work much more efficiently.	Valsad Nagarpalika	Name:- Shri J U Vasava(Chief officer nagarpalika valsad).	Shri Kantibhai Patel	Shri J A Jadav,	Electrical
10	In our Industry thumb impression is used to monitor attendance of Industry persons. We are looking for a better solution where the attendance can be monitored more effectively, and time and motion study analysis can be also done effectively. The monthly attendance record can be generated automatically from daily records and the wages can belinked eith the attendance system with inclusion of time and overtime data and calculation.	NITREX	Shri Manaoranjnan Paik		Dr. B. R. Sudani	Electrical and Chemical
11	Solution of leakage current problem on overhead lines and transformers on LT distribution side to ensure safety of personnel and animals against leakage.	DGVCL Valsad	Shri. P. G. Patel	M S Jaitley	Name:-S K Pawar ,K L Mokariya	Electrical
12	For all Industries HT and LT switchgears come with communication port.All the proqramable relays,ACBs and VCBs,come with threat of security concern.we need to minimize the threat from foreign agency.	OUM ELECMECH PVT LTD	Hemin C Modi		1 K L Mokariya 2 A N Parmar	Electrical
13	Implementation of GSM based ON/OFF control of agricultural pump unit	Tech Sun Bio	Pragnesh K. Chaudhary	Tejas Patel	Prof. R. D. Patel	Electrical
14	Trip optimisation of quarry tippers to enhance productivity.	M/S. Bajarang Stone Quarry Works.	Name- Mr. Paresh J Patel (Partner)	Name- Mr. Devendra J Patel	Name- Mr. Devendra J Patel	Civil
15	To minimise the manual labours for poring of material in concrete mixer for preparing conventional concrete.	MAHALAXMI CONSTRUCTION CO.	Name- Mr. Rajeshbhai B. Rathod	Name- Mr. Chetanbhai N. Solanky	Name- Mr. Dhaval T. Barot	Civil
16	To determine the actual cement content in existing concrete member.	MAHALAXMI CONSTRUCTION CO.	Name- Mr. Rajeshbhai B. Rathod	Name- Mr. Chetanbhai N. Solanky	Name- Miss. Priyanka S. Patel	Civil

17	Water supply controlling in conventional concrete preparation	MAHALAXMI CONSTRUCTION CO.	Name- Mr. Rajeshbhai B. Rathod	Name- Mr. Chetanbhai N. Solanky	Name- Miss. Neha S. Patel	Civil
18	Road maintenance record keeping system	Government Organisation(Road and building department)	Name- N. P. Panchal	Name- M. U. Patel	Name- Mr. Devendra J Patel	Civil
19	Augmentation of existing Underground Drainage System enhance Discharge capacity of Underground Drainage System of Old main city of Valsad	Valsad Nagarpalika(ULB)	Name- J. U. Vasava	Name- Hitesh P. Patel	Name- Mr. Hemanshu K. Rana	Civil
20	Avoid Degradation of grains which creates health hazard problem due to flood in low lying area of city	Valsad Nagarpalika(ULB)	Name- J. U. Vasava	Name- Hitesh P. Patel	Name- Mr. Viral D. Patel	Civil
21	Removal of refractory organics and color from treated effluent	Vapi Green Enviro Limited	Mr. Sachin Ramesh Dhake		Prof. Khyati K Modi	Environmental
22	Removal of Dust from Silver Melting Furnace	Nisarg Enviro Consultant	Mr. Jagdish Chauhan		Prof. Monali Chaudhari	Environmental
23	Performance of underground sewerage system at Valsad.	Valsad Nagarpalika	Shri. J U Vasava	Shri. Kantibhai Patel	Prof. Monali H Patel	Environmental
24	Solid waste management Strategy for Valsad city	Valsad Nagarpalika	Shri. J U Vasava	Shri. Kantibhai Patel	Prof. Meera K Kunvarani	Environmental
25	To develop a plant trimmer for road side way fenceings.	Bhavsar Construction, Valsad	Mr. Pranav C. Bhavsar		Prof. S V Damania	Mechanical
26	To develop a mechanism to maintain constant velocity travel of welding rod and maintain constant arc gap for Arc welding process.	Tandel Engineering, Pardi	Mr. Prakash Parmar		Prof. K. D. Tandel	Mechanical
27	Elimination of casting defects: Blowholes and Porosity is needed particularly from heavy casted flange made up of cast steel during CO2 sand casting process.	Kirti Alloy's Steel cast, Pardi	Mr. Ram Sanchi		Prof. S.V. Damania	Mechanical
28	To establish heat treatment process for maximising torque transmission capacity of shaft without any permanent deformation. Shaft Material: 18CrNiMo7, 20MnCr5, En36, En24, En9	Essential Power Transmission Pvt. Ltd	Mr. Chetan Prajapati		Prof. B. K. Patel	Mechanical
29	To develop a cutter to separate plastic made spoon from runner in single	Endeavour Enterprise	Mr. Pravin D Tandel		Mr. Kumar J. Patel	Mechanical
30	Aviko ball scanning machine required clean and nett balls to scanning the ball inspection up to 100%. In the lapping process the ball quality is not good which increase the cycle time. Aviko input ball dry in centrifugal drier. For this process drying agent is used in drier named neogrit is required to be changed at every after 30 batches (400 kg each batch) drying. That means consumption of drying agent is high. Due to which cycle time is increased and productivity is decreased. So, we required some another alternative arrangement for reducing neogrit consumption in drier with some mechanical process.	NHB BALL & ROLLER LTD	Mr. Chandrakant Patel		Prof. R S ENGINEER	Mechanical

31	Reciprocating Comp: generally we are facing back pressure problem resulting in overheating of head.	Creative Traders	Mr. Divyesh Jadav		Prof. S V Damania	Mechanical
32	Reciprocating Comp: oil (Lubricant) carryover problem due to wear tear of piston rings.	Creative Traders	Mr. Divyesh Jadav		Prof. N Z Patel	Mechanical
33	Screw Comp: oil carry over due and Hi temperature of Air End.	Creative Traders	Mr. Divyesh Jadav		Prof. S V Damania	Mechanical
34	To develop an Attachment for Machining of Angular (Y-Type) Pneumatic Valve on Lathe Machine	M/s. BHOO MI ENGTNEERING	Mr. NARESHKUMAR DHUPAR		Mrs. DIMPLE N GANDHI	Mechanical
35	Increase effective cooling rate in heat exchanger using cooling tower in plant	KRISHNA FINECHEM INDUSTRIES	Mr. Jagdish Paramar		Mr. Ankit V Patel	Chemical
36	Full vacuum is not maintained during distillation process with water vacuum pump	KRISHNA FINECHEM INDUSTRIES	Mr. Jagdish Paramar		Mrs. Anjali H. Prajapati	Chemical
37	We need some chemical which can be used to fasten the diamond cutting process. Use of laser cutting techniques is time consuming and requires some more energy. We need to replace the machine to make this process much more energy efficient and so environment friendly.	Forever Technology	Mukesh V Valani		Dr. B. R. Sudani	Chemical
38	We need to have a cheap adhesive material for sticking precious stone and gems to different materials. Because some chemical adhesives are not giving long time stickiness with economic way.	Forever Technology	Mukesh V Valani		Dr. B. R. Sudani	Chemical
39	To find a cheaper material for the replacement of Phosphorus Bronz PB2 as it is very costly material. The company also seeks the proper reason for the use of the replacing material.	National Motors Mfg. Co.,	Hiren Shah and Sidhdharth Shah		Prof. R. C. Malan & Prof. Reshma Malan	Applied Sci. & Hum.
40	To resolve the problem at aentry level in convincing the customers to buy products instead of existing vendors	Dipti Glass Works	Hemal Patel		Prof. R. C. Malan & Prof. Reshma Malan	Applied Sci. & Hum.