

# Auto Thrust



When we thrust, we leave everyone in dust.....

September 2017

# Srinivas Institute of Technology, Mangaluru Department of Automobile Engineering

Volume 2, Issue 1



### PRINCIPAL'S MESSAGE

I am happy to inform that the Automobile Engineering Department is bringing out the second edition of "Auto Thrust" E-newsletter for the year 2017-18. This news letter gives information regarding trending technology of automobile industry and departmental activities. I happily congratulate the members of the editorial board for their efforts in bringing out the E-newsletter. I wish all the best for their future endeavors.

Dr. Shrinivasa Mayya D.

#### H.O.D'S MESSAGE

Auto Thrust in this issue has transformed a lot after successfully completing one year. On this occasion I would like to first congratulate TEAM SITE RACING, an SAE team from Automobile Engineering Department of Srinivas Institute of Technology, for doing extremely well in the SAE Baja 2018 competition at National Level. This is a clear indication of the kind of enthusiasm and participating sprit of our students under the good guidance of faculty. I wish all the success to the team for their upcoming rounds.

As usual, this e-newsletter briefly covers the latest happenings in Auto sector as well as various activities in the department. I request all the students to contribute more in terms of research articles and ideas so as to kindle inter department interest in this fascinating field. I also congratulate all the final year students for recording 100 percent result. All the best team Auto Thrust.

Dr. Ramakrishna N. Heode





# Auto Thrust

When we thrust, we leave everyone in dust..

Imagination is more important than Knowledge

Department of Automobile Engineering
Srinivas Institute of Technology, Mangaluru

Volume 2, Issue 1

#### September - 2017

# Inside this issue:

3

**Industry News** 

Student's blog

Professor's blog

_		
Snap Shots	6	
Tech Tune	8	
Latest Vehicle ner	WS	
	10	
Kannada Zone	11	
Students Achieve-		
ments	12	

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### Targeting 40% BTE with advanced VCR

Nissan's announcement at the 2016 Paris Motor Show that it will bring a variable-compression-ratio engine to production in 2018 energized those in the advanced- ICE development community who also have VCR technologies in the works. Varying compression ratio according to load, speed and other parameters is a significant 'lever' that has yet to be pulled, in series-production volumes, to further optimize 4-stroke efficiency.

"The automakers have picked the low-hanging 'fruit' and are now climbing higher in the technology 'tree' to pick what will enable them to achieve the 2025 CO<sub>2</sub> regulations," explained Henri **Trintignac**, Chief Executive Officer at MCE-5 Development. The Lyon, France-based enginetech company has been focused on its unique VCRi system for 17 years and has documented its progress via many SAE technical papers and presentations over the past decade. Its first development contract, signed in 2015, is with China's **Dongfeng Motor**.

MCE-5's system uses a dedicated cylinder block, crank train and actuators to provide continuous compression ratio control, ranging between 8:1 and [geometric ratio] 18:1 to each cylinder (see http://articles. sae.org/6043/). **Trintignac**, a former Valeo power train systems executive, said the turbocharged VCRi can switch from minimum to maximum compression ratios in less than 100 ms. The company now is demonstrating the thermodynamic synergies of combining VCR with infinitely variable valve actuation. The aim is to enable enhanced Miller/Atkinson-cycle operation and

thus improve part-load efficiency by reducing heat and pumping losses and optimize the compression-expansion ratio. With this combination of tech-



nologies, the inlet valves are open only during half of the compression stroke, so the effective compression ratio is in the range of 10:1.

Engineers don't have books in hands but revolutionary ideas in minds

Refinement of the VCR mechanism and controls continues while combustion engineers play with geometric compression ratios as high as 23:1. Trintignac invites OEM engineers to Lyon to drive MCE-5's demo vehicle and find out more. "To the industry it's all about cost-to-benefit ratio—how many euros or dollars they have to spend to save each gram of CO2," he noted. "Hybrid 48-volt systems save almost 15 grams on the WLTP cycle and we're in the same range, 10-15 grams. "But the 48-volt hybrid costs 60 to 70 euros per gram saved. Our VCR costs 30 euros per gram."

(Source: SAE India)

# Short Introduction of Kerala state

**Coordinates** – 8.5 N 77°E

**Statehood**—1November 1956

Capital city – Thiruvananthapuram

**Districts** - 14

**Governor** – P. Sathasivam **Chief minister** – Pinarayi Vijayan (CPIM)

**Legislature** – unicameral (141 seats)

**Area** total  $-38,863 \text{ km}^2$  (15,005 sq mi)

Area rank – 22nd

**Population (2017)** – 36.96 Million

**Population Rank** – 13th **Population Density** – 859 / sq km

**Demonym (s)** – Keralite, Malayali

**Iso 3166 code** – IN-KL **Official language** – Malavalam

**Human Development Index** - 0.712 (High)

**Literacy rate** – 93.91% State Symbols

**Animal** – Indian Elephant **Bird** – Great Hornbill

Flower – Golden Shower Tree Flower

Tree – Coconut tree

**Tourist Places** – Athirappilly Falls, Munnar, Kuttanad, Kovalam Beach, Wayanad Wild Life Sanctuary

**Major Festivals** – Thrissur Pooram & Onam

**Dance** – Kathakali, Mohiniyattam, Koodiyattom, Thullal & Krishnanattam

**Nick Names** – Spice Garden Of India, Land Of Coconuts, God's own country

## Lexus debuts in India with a hybrid focused

Lexus debuted in India in late March when the company unveiled three hybrid models chosen for the Indian market: the RX 450h, ES 300h and LX450d vehicles. According to Lexus, the choice to focus on hybrid vehicles shows an understanding of the Indian consumer: They have an instinct for luxury, which is coupled with sensibilities around the need for high-performing

Indian consumer with an amazing experience through our vehicles, our service and through any interaction with our brand. We are excited about what we can bring to the luxury market in India, where we see opportunities mapped to the remarkable growth the country is experiencing. This is just the beginning—we look forward to bringing more exciting products to India in the future."



yet ecofriendly vehicles. From visually captivating exterior designs and interior cabins that exude luxury and attention to detail, to the environmentally conscious hybrid drive technology, Lexus says it will deliver to the highest expectations of Indian luxury consumers. The models will be available at guest experience centers located in New Delhi, Gurgaon, Mumbai and Bangalore. Additionally, after-sales service facilities will also be available in Chandigarh, Hyderabad, Chennai and Kochi.

"How India experiences luxury is evolving with its affluence," Lexus India Senior Vice President, Akitoshi Takemura said, speaking about Lexus' plans for India.

"Lexus will be providing the

The first-ever Lexus India vehicle lineup reflects the signature style and quality on which the legacy of the Lexus brand is built, and is an example of Lexus' dedication to creating cars with exciting, emotional designs and exhilarating performance.

The all-new Lexus LS made a surprise appearance in a sneak preview at the end of the unveiling. It will be available in 2018.

"The original LS rivaled the very best luxury vehicles. We had big dreams about what a luxury vehicle could be. Those dreams were realized with a vehicle and guest experience that disruptedthe luxury automotive industry," Lexus International President Yoshihiro Sawa said in a release.

Enjoy your own life without comparing it with that of another.

## AeroMobil 3.0 transforms from car to flying car

#### A Flying car is revealed.

AeroMobil 3.0 was introduced this week at the Pioneers Festival in Vienna. The current prototype AeroMobil 3.0 incorporates improvements and upgrades to the previous AeroMobil 2.5.

Whether you think of it as a car that morphs into a plane or a plane that changes into a car, said Isaac Bober on Thursday in Practical Motoring, it was "mind-blowing." AeroMobil's founders are Juraj Vaculik, CEO, and Stefan Klein, chief designer. Quoted in Practical Motoring, Klein said, "These objects [the flying car] are coming from absolutely opposite worlds. Aeroplanes need lift, cars need down force." To mesh the two, you can integrate two functions in one object or use metamorphosis, he said, with transfer from one position to second position. The two-seat device has a steel framework and carbon coating and could even land on stretches of lawn or farmland.

" As a car it fits into any standard parking space, uses regular gasoline, and can be used in

#### An octopus has three hearts and the colour of its blood is blue

road traffic just like any other car. As a plane it can use any airport in the world, but can also take off and land using any grass strip or paved surface just a few hundred meters long," said the company site. Practical Motoring noted they had this flying car in mind for use in places where infrastructure is difficult; the 3.0 would support people who could drive as far as the road allows and then fly the rest of the way toward their destinations.

Top speed is listed by the company as 200 km/h and takeoff speed is listed at 130 km/h. The range is 700 km and fuel consumption is 15 l/h.

The engine is a Rotax 912. Appearance at the festival marked its world premiere as a prototype, displayed for the first time to a public audience. "At Pioneers we cannot imagine a single piece of technology that is a better representation of the future other than the flying car," said Juergen Furian, co-founder of Pioneers.



Last year, The Wall Street Journal observed how "Flying-car designs have been coming and going almost as long as cars and airplanes have been around. Some, like the 1950s Aerocar, worked but never caught on, possibly because people considered them impractical or lacking adequate performance on the road or in the air. Today the combination of lightweight materials, more efficient engines and more flexible rules in civil aviation could make flying cars feasible for a broader.

Mr. Godwin E Castelino

5th sem Automobile Engg

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## **V2V Communication**

Vehicle-to-vehicle (V2V) communications comprises a wireless network where automobiles send messages to each other with information about what they're doing. This data would include speed, location, direction of travel, braking and loss of stability. Vehicle-to-vehicle technology uses dedicated short-range communications (DSRC), a standard set



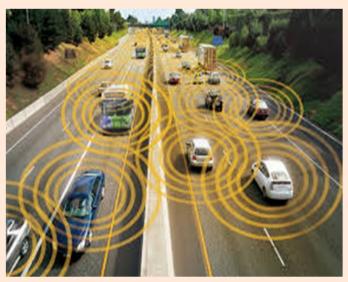
forth by bodies like FCC and ISO.

Sometimes it's described as being a Wi-Fi network because one of the possible frequencies is 5.9GHz, which is used by Wi-Fi, but it's more accurate to say "Wi-Fi-like." The range is up to 300 meters or 1000 feet or about 10 seconds at highway speeds (not 3 seconds as some reports say). V2V would be a mesh network, meaning every node (car, smart traffic signal, etc.) could send, capture and retransmit signals. Five to 10 hops on the network would gather traffic conditions a mile ahead. That's enough time for even the most distracted driver to take his foot off the gas.

# You can't cry in space because your tears won't ever fall

On the first cars, V2V warnings might come to the driver as an alert, perhaps a red light that flashes in the instrument panel, or an amber then red alert for escalating problems. It might indicate the

direction of the threat. All that is fluid for now since V2V is still a concept with several thousand working prototypes or retrofitted test cars. Most of the prototypes have advanced to stage where the cars brake and sometimes steer around hazards. Why? It's more exciting for a legislator or journalist to see a car that stops or swerves, not one with a flashing



lamp.

Traffic signals or other stationary devices are called V2I or vehicle to infrastructure. Often they're just rolled into the V2V umbrella to avoid too many TLAs (three-letter acronyms). Some automakers have their own terms for V2V such as Carto-X, which encompasses other vehicles and the infrastructure. There's also a push for the term "internet of cars" playing off "internet of things" as well as the broader term "connected car" which covers telematics as well and the popular-press term "talking car." V2V seems to be the phrase that's winning out. Many automobile manufacturers including are BMW, Audi, Honda, General Motors, Volvo and Daimler working and developing this technology.

Mr. Girish A R
Asst. Professor
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Farewell function of 8th sem Automobile students 2017









**Teachers Day Celebration under AMARA association 2017** 

# **Snap shots**

## **Congratulations**



Valson V Dsouza



**Rajath Shetty** Placed in Nandi Toyota Bangaluru



Joshua Pereira



**Prajath Shetty** 

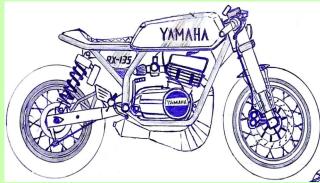


**PVC Model of vehicle NEBULA Mahindra SAE BAJA 2018** 





Art by Rakshith T 5th sem automobile



Art by Prajwal 5th sem automobile

**Financial Education** workshop to students, organized by AMARA in association with Securities and Exchange **Board** of India (SEBI)









Photograph by Savyasachi 5th sem automobile

#### MINI ELECTRIC CONCEPT REVEALED

MINI has digitally revealed the Electric Concept, which would make its first public appearance at IAA Cars 2017 in Frankfurt on September 16. This debut follows the launch of the brand's first ever electrified production model, the Countryman Plug-in Hybrid earlier in 2017. The production version of Mini Electric Concept would be unveiled in 2019. For those asking, the Mini E was the first all-electric car from the BMW Group in 2008 to be driven by private users in everyday traffic conditions as part of an extensive field trial.



"The systematic electrification of the brand and product portfolio is a mainstay of the BMW Group's NUMBER ONE > NEXT strategy. The MINI ELECTRIC CONCEPT offers a thrilling preview of the all-electric production vehicle. MINI and electrification make a perfect match," remarked Harald Krüger, Chairman of the Board of Management of BMW AG.

The all-electric concept flaunts hexagonal radiator grille and circular all-LED headlights with daytime running lights, while it is painted in a contrasting silver and yellow colour scheme that is reminiscent of the earlier Mini E. The front apron's simulated "air intakes" are also sealed, yet they still

include dark louvres that look like cooling fins.

Over 600 MINI E cars entered service worldwide for the field study which provided vital insights into the daily use of all-electric cars. The learnings from this trial were subsequently incorporated into the development of the BMW i3. In spring 2017, the BMW Group presented the first ever production plug-in hybrid model from the British premium brand in the form of the MINI Countryman Plug-in Hybrid.

"With its characteristic go-kart feel and



powerful electric motor, the MINI ELECTRIC CONCEPT is great fun to drive while also being completely suitable for everyday use – and producing zero emissions to boot. That's how we at MINI envisage electric mobility in tomorrow's world," said Peter Schwarzenbauer, Member of the Board of Management of BMW AG, responsible for MINI, Rolls-Royce and BMW Motorrad.

Mr. Amit Santra

5th sem Automobile Engg

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#### **Definition of some common terms of Automobile**

Continued .....(from Vol 1 Issue 2)

- **20. OBD-(On Board Diagnose)**: The OBD system will provide status of the vehicles components and error codes that will help to trouble shoot problems with the vehicle.
- **21. AIAG Automotive Industry Action Group**: AIAG is a consortium of industry experts from major car manufacturers that collaborate to develop quality processes, establish global standards for development and production and harmonize business practices between companies.
- **22. Automatic Transmission :** Automatic transmission system within a vehicle will automatically change gears within the transmission in response to the vehicle speed.
- **23. CVT (Continuously Variable Transmission):** Automatic transmission system where the transmission ratios are constantly adjusted to provide the best performance and fuel economy
- **24. Ergonomics:** The study of how humans interact with the vehicle or human engineering. Automotive engineers will look at the design of the cockpit and how humans will interact with all the necessary controls of the vehicle to make it as comfortable as possible for the driver and the passenger.
- **25. NVH** (**Noise Vibration & Harshness**): Automotive engineers work to eliminate exterior noise and create a peaceful environment within the vehicle additionally they work to create a smooth ride, free from vibration and harshness.
- **26. Plenum :** The base of the windshield of the vehicle where the windshield wipers are located or the location of the intake manifold.
- **27.** Wheelbase: The wheelbase of a vehicle is the distance between the center of the front and the rear wheels.
- **28.** Engine Displacement: The volume that is

displaced from all the pistons inside the engine cylinders, volume does not include the combustion chamber and is measured in both metric cc/L and English units cubic inches.

- **29. Just in Time Manufacturing (JIT):** Just in time manufacturing is a manufacturing philosophy where the assembly process occurs when an order is received. This philosophy reduces the overhead inventory costs for manufacturing by not maintaining large amounts of components.
- **30. CRDi** : Common Rail Direct Injection.
- **31. TDi**: Turbocharged Direct Injection.
- **32. DTS-i**: Digital Twin Spark Ignition.
- **33. VTVT**: Variable Timing Valve Train.
- **34. MPFI**: Multi point fuel injection.
- **35. SOHC:** Single Over Head Camshaft.
- **36. DOHC**: Double Overhead Camshaft.
- **37. SUV:** Typically an off-roading capable car, an SUV (Sports Utility Vehicle) generally has a 4 wheel drive, meaning engine power flows to all the 4 wheels of the car. SUVs generally stand tall with high ground clearance, making it suitable for all kinds of terrain. It maybe a 5 or 7 seater depending on the length of the vehicle.
- **38. MUV**: Multi Utility Vehicle.
- **39. HCV :** Heavy Commercial Vehicle .
- **40.** LCV: Light Commercial Vehicle.
- **41. Hatchback:** a car with a door across the full width at the back end that opens upwards to provide easy access for loading.
- **42. Sedan:** an enclosed automobile body having two or four doors and seating four or more persons on two full-width seats.

#### Latest two wheel vehicle

#### **SUZUKI GIXXER Fi**

**Engine type:** 4- stroke, 1-cylinder Air-cooled

Valve system: SOHC, 2Valve

**Displacement:** 154.9 cm<sup>3</sup> **Transmission:** 5 Speed MT

**Output & Torque:** 14.8ps @ 8000rpm 14 NM

@ 6000rpm

Expected price: 95,000 Rs Fuel system: Fuel Injection



#### **HERO ZIR**

Engine type: 4- stroke, 1-cylinder Liquid-

cooled

Valve system: OHC, 2Valve Displacement: 157.1 cm<sup>3</sup> Transmission: Automatic

**Power & Torque:** 13.4 BHP @ 8500rpm **12.7** 

NM @ 7000rpm

**Expected price:** 80,000 Rs **Maximum Speed:** 110 kmph



# Four Wheeler TATA NEXON

**Engine:** 1.2L Turbo petrol & 1.5L Turbo diesel

**Power:** 108 BHP @ 5,000 RPM

**Torque:** 170 Nm@ 4000 RPM 260 Nm@ 4000

**RPM** 

Transmission: 6 Speed manual Mileage: 10 9kmpl & 24 kmpl Ground clearance: 209 mm Expected price: 11 Lakhs



#### **RENULT CAPTURE**

**Engine**: 1.5L petrol & 1.5L Turbo diesel

**Power:** 104 BHP & 109 BHP @ 5,000 RPM, **Torque**: 142 Nm@ 4000 RPM 250 Nm@ 4000

RPM

**Transmission:** 5 & 6 Speed manual (petrol

&diesel)

**Boot space:** 387-litres

**Ground clearance:** 204 mm **Expected price:** 8 Lakhs



#### ಚಹಾ: ಒಂದು ಪಾನೀಯ

ಸಂದರ್ಭ ೧: ಏನಾಯ್ತು ? ತಲೆ ನೋಯ್ತಾ ಇದೇನಾ? ಇರು ಒಂದು ಕಪ್ ಚಹಾ ಮಾಡಿ ಕೊಡ್ತಿನಿ, ಅದನ್ನು ಕುಡಿ, ಎಲ್ಲ ಸರಿ ಹೋಗುತ್ತೆ!!

ಸಂದರ್ಭ 9: ನಿದ್ದೆ ಬರ್ತಾ ಇದೇನಾ? ತಗೋ ಒಂದು ಕಪ್ ಚಹಾ ಕುಡಿ, ನಿದ್ದೆ ಬರಲ್ಲಾ!!!

ಸಂದರ್ಭ ೩: ಯಾಕೆ ಬೇಜಾರ್ ಅಲ್ಲಿ ಇದ್ದೀಯಾ ಏನಾಯಿತು? ಸರಿ ನಡೆ ಚಹಾ ಕುಡಿದು ಬರೋಣ, ಬೇಜಾರು ಕಳೆದೋಗುತ್ತೆ.!! ಸಂದರ್ಭ ೪: ಯಾಕೆ ಸರ್ ತಲೆ ಓಡ್ತಾ ಇಲ್ವಾ? ಸರಿ ಹಾಗಾದ್ರೆ ಈ ಟೀ ಕುಡಿಯಿರಿ ತಲೆ ಚೆನ್ನಾಗಿ ಕೆಲಸ ಮಾಡುತ್ತೆ!!!

ಸಂದರ್ಭ ೫: ತುಂಬಾ ಆಯಾಸ ಆಗಿದೇನಾ?? ತಗೊಳ್ಳಿ ಟೀ ಕುಡೀರಿ, ಆಯಾಸ ಎಲ್ಲ ಇಳಿದು ಹೋಗುತ್ತೆ!!!!

ಇಂತಹ ಮಾತುಗಳನ್ನು ನಾವು ನೀವೆಲ್ಲ ಕೇಳಿದ್ದೇವೆ, ಮತ್ತು ಆಡಿದ್ದೇವೆ ಕೂಡ!! ಇದು ಚಹಾ ಎಂಬ ಒಂದು ಪಾನೀಯಕ್ಕೆ ಇರುವ ತಾಕತ್ತನ್ನು ತೋರಿಸಿ ಕೊಡುತ್ತೆ. ಇವತ್ತು ಜೀವನ ಹೇಗೆ ಆಗಿದೆ ಅಂದರೆ, ಚಹಾ ಕುಡಿಯದೆ ಒಂದು ದಿನ ಮುಗಿಯೋ ಹಾಗಿಲ್ಲ ಎಂಬಂತಾಗಿದೆ. ಇದು ಕೇವಲ ಒಂದು ವರ್ಗಕ್ಕೆ ಸೇರಿದ ಪಾನೀಯ ಅಲ್ಲ, ಚಿಕ್ಕ ಮಕ್ಕಳಿಂದ ಹಿಡಿದು, ಯುವಕರು, ಇಳಿ ವಯಸ್ಸಿನ ಜನರು ಇದನ್ನ ಉಪಯೋಗಿಸದೆ ಇರಲಾರರು.

ಚಹಾ ಇದು ಎಲ್ಲ ವಯಸ್ಸಿನ ಜನರು ಉಪಯೋಗಿಸುವ ಕಡಿಮೆ ಬೆಲೆಯ ಒಂದು ಉತ್ತಮ ಪಾನೀಯ ಅಂದರೆ ತಪ್ಪಾಗಲಾರದು. ಅದಕ್ಕೆ ಆಲ್ವಾ ಇದು ಎಲ್ಲ ಹೋಟೆಲ್ ಗಳಲ್ಲೂ, ಎಲ್ಲ ಮನೆಗಳಲ್ಲೂ ಸಾಮಾನ್ಯ ಅಂತ ಅನ್ನೋ ಹಾಗಾಗಿದೆ. ಇನ್ನು ಹಳ್ಳಿಗಳಲ್ಲಿ ಚಹಾಕ್ಕೆ ಕೊಡೊ ಪ್ರಾಮುಖ್ಯತೆಯನ್ನು, ಅವರನ್ನು ಮಾತನಾಡಿಸಿದಾಗ ಅವರ ಮಾತುಗಳಲ್ಲೇ ತಿಳಿದು ಬರುತ್ತೆ. ತಮಾಷೆಯ ಸಂಗತಿ ಅಂದರೆ, ಏನಮ್ಮ ನಿನಗೆ ಏನೇ ಬರದಿದ್ರೂ ಕೇವಲ ಚಹಾ ಆದರು ಮಾಡೋಕೆ ಬರುತ್ತಾ? ಅಂತ ಹೆಣ್ಣು ಮಕ್ಕಳಿಗೆ ಕೇಳುವ ಮಾತಿದೆ. ಅಂದರೆ ಇದು ಚಹಾವನ್ನು ತಯಾರಿಸುವ ಬಗೆ ಎಷ್ಟು ಸುಲಭದ್ದು ಅಂತ ತೋರಿಸಿ ಕೊಡುತ್ತೆ.

ಚಹಾ ಇದೊಂದು ಜಗತ್ತಿನಲ್ಲಿ, ನೀರಿನ ನಂತರ ಅತಿ ಹೆಚ್ಚು ಉಪಯೋಗಿಸುವ ಎರಡನೇ ದ್ರವ ಪದಾರ್ಥವಾಗಿದೆ. ಇನ್ನು ಇದರ ಇತಿಹಾಸದ ಬಗ್ಗೆ ತಿಳಿದುಕೊಳ್ಳುವುದಾದರೆ, ಇದು ಹುಟ್ಟಿಕೊಂಡಿದ್ದು ದಕ್ಷಿಣ - ಪಶ್ಚಿಮ ಚೀನಾದಲ್ಲಿ ಮತ್ತು ಇದನ್ನು ಕೆಲವು ರೋಗಗಳಿಗೆ ಔಷಧಿಯನ್ನಾಗಿ ಬಳಸಲಾಗುತಿತ್ತು. ಚಹಾವನ್ನು ಭಾರತಕ್ಕೆ ಪರಿಚಯಿಸಿದವರು ಕೆಂಪು ಮುಖದ ಆಂಗ್ಲರು. ಇದಕ್ಕೆ ಕಾರಣ ಚಹಾದ ಮೇಲೆ ಚೀನಾ ದೇಶದ ಏಕಸ್ವಾಮ್ಯತೆವನ್ನು ಮುರಿಯುವುದಾಗಿತ್ತು ಮತ್ತು ಅದಕ್ಕೆ ಅವರು

ಪ್ರೀತಿಸುವುದಲ್ಲ ಸಿಗುವುದದಾದರೆ ಕಣ್ಣೀರಿಗೆ ಬೆಲೆ ಎಲ್ಲಿದೆ? ಸಿಗುವುದೆಲ್ಲವನ್ನು ಪ್ರೀತಿಸುವುದಾದರೆ ಕಣ್ಣೀರಿಗೆ ಅವಕಾಶ ಎಲ್ಲಿದೆ?

ಆಯ್ಕೆ ಮಾಡಿಕೊಂಡಿದ್ದು ಭಾರತದ ಸಂಪನ್ಮೂಲಗಳನ್ನು.

ಚಹಾವನ್ನು ಬೇರೆ ಬೇರೆ ಹೆಸರುಗಳಿಂದ ಕರೆಯುತ್ತಾರೆ ಮತ್ತು ಚಹಾದಲ್ಲಿನ "ಚಾ" ಎಂಬ ಪದವು ಚೀನಾ ದೇಶದ ಮ್ಯಾಂಡರಿನ್ ಎಂಬ ಪ್ರಾಂತ್ಯದಿಂದ ಬಂದಿದೆ. ಚಹಾದ ಇತರ ಮಾದರಿಗಳೆಂದರೆ "ಹಸಿರು" ಚಹಾ, "ಬಿಳಿ" ಚಹಾ, "ಹಳದಿ" ಚಹಾ, "ಕಪ್ಪು" ಚಹಾ ಮತ್ತು ಇತ್ಯಾದಿ. ಭಾರತದಲ್ಲಿ ಚಹಾಕ್ಕೆ ಎಷ್ಟು ಪ್ರಾಮುಖ್ಯತೆ ಇದೆ ಅಂದರೆ, ಇದು ತಯಾರಿಸುವ ಒಟ್ಟು ಚಹಾ ಪುಡಿಯಲ್ಲಿ ೭೦ % ಭಾರತದಲ್ಲೇ ಉಪಯೋಗಿಸುತ್ತಾರೆ.

ಹಸಿರು ಮತ್ತು ಕಪ್ಪು ಚಹಾ ಉಪಯೋಗಿಸುವದರಿಂದ ತೂಕ ಇಳಿಕೆ, ಕ್ಯಾನ್ಸರ್ ಮತ್ತು ಅಲ್ಜ್ಜೇಯಿಮ್ಸ್ಸ್ ಎಂಬ ಕಾಯಿಲೆಗಳಿಂದ ದೇಹವನ್ನು ರಕ್ಷಿಸಿಕೊಳ್ಳಬಹುದು ಎಂದು ಗೊತ್ತಾಗಿದೆ. ಆದರೆ ಚಹಾದ ಅತಿಯಾದ ಸೇವನೆಯಿಂದ ವಾಕರಿಕೆ, ಆಮ್ಲತೆ, ನಿದ್ರಾಹೀನತೆ, ಖಿನ್ನತೆ ಇನ್ನು ಹಲವು ತೊಂದರೆಗಳನ್ನು ಅನುಭವಿಸಬೇಕಾಗುತ್ತೆ!!!!!!!!!

> ಪ್ರಕಾಶ ಎಸ್. ಟಿ ಉಪ ಪ್ರಾಧ್ಯಾಪಕರು, ಆಟೋಮೊಬೈಲ್ ವಿಭಾಗ ಏಸ್.ಅಯ್.ಟಿ ಮಂಗಳೂರು

Students participation in Events			
Team Name	TEAM SITE RACING		
Vehicle Name	'NEBULA'		
Qualified events Mahindra SAE BAJA 2018 virtual round, Enduro Student India (ESI) Rule Book Quiz 2018			
Secured rank	1st in Mangalore, 5th in Karnataka & 63rd rank in India out of 400 team		

Students Result (8<sup>th</sup> sem Automobile) - 2017 100%

	Students Alumni details				
SI No	Name	Company name & workplace			
1	Sinan Arafa	Aster DM Groups, Dubai			
2	Maashal M	M.Des in Product Design engg, Pune			
3	Arun Varghese	Popular Motor Corporation, Bengaluru			
4	Anurag	EMAAR Group, Dubai			
5	Mahabaleshwar	John Deere India Pvt Ltd, Pune			
6	Rahul Bhandari	Aravind Motors Pvt Ltd, Mangaluru			
7	Manjunath	Century Automobiles, Mangaluru			
8	Vikas	L & T Construction Equipments Ltd, Bengaluru			
9	Ajay	Sai Service Pvt Ltd, Pune			
10	Anudeep Gatti	Muneer Heavy Earth moving equipments, Dubai			
11	Gajanan Shenoy	Mandovi Motors Pvt Ltd, Mangaluru			

SIT Mangalore various events 2017			
SST training schedule	4 <sup>th</sup> year	28 <sup>th</sup> August to 1 <sup>st</sup> sept 2017	
	2 <sup>nd</sup> year	11th September to 14th sept 2017	
	3 <sup>rd</sup> year	24th Oct to 27th Oct 2017	
Holidays	August 25 <sup>th</sup>	Ganesha chaturthi	
	Sept. 2 <sup>nd</sup>	Bakrid	
	Sept. 19 <sup>th</sup>	Mahalaya Amavasye	
	Sept. 29 <sup>th</sup>	Maha Navami	
	Sept. 30 <sup>th</sup>	Vijayadashami	
	Oct. 2 <sup>nd</sup>	Gandhi jayanthi	
	Oct. 18 <sup>th</sup>	Naraka chaturdasi	
	Oct. 20 <sup>th</sup>	Balipadyami	
	Nov. 1 <sup>st</sup>	Kannada Rajyostava	
Internal assessment test	1st internal tests	18, 20, 21 September 2017	
	2nd internal tests	15, 16, 17 October 2017	
	3rd internal tests	16, 17, 18 November 2017	