

Parshvanath Charitable Trust's
A. P. SHAH INSTITUTE OF TECHNOLOGY

Department of
Information Technology



BITS & BYTES

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Editorials



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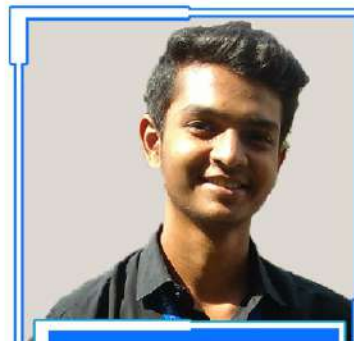
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Message From

Principal's Desk

It is a matter of great pride and satisfaction for A.P. Shah Institute of Technology to bring out the newsletter "Bits & Bytes" released by the Department of Information Technology. Department believes and works with the goal "To be a prime center of excellence by transforming students into globally competent IT professionals". This newsletter is presenting a glimpse of the growth of the department on many fronts. I am sure that this newsletter will give a positive signal to the students and faculties who are interested in the Technical education and Technology based activities.

These value additions are very much essential for the young engineers, to demonstrate their ideas for the development of India. Follow your dreams and work hard for it. If you don't step forward, you are always at the same place. Bits & Bytes newsletter is just that step to make them move forward towards their dreams.

I congratulate the Editorial Board of this newsletter who have played wonderful role in accomplishing the task. Also my heartfelt congratulation to the Head of Department and the faculties for their fruitful efforts.

Dr. Uttam D Kolekar

PhD(Electronics and Telecommunication Engineering)



Message From

HOD's Desk

It gives me immense pleasure and it is matter of pride to present before our readers the first volume of Information Technology Department's newsletter "Bits & Bytes". It is a milestone that marks our growth, unfolds our imaginations, and gives life to our thoughts and aspirations. It unleashes a wide spectrum of creative skills ranging from writing to editing and even in designing the newsletter. It reflects upon Outstanding contribution made by faculties and students in their areas of Interests during Academic Year 2017-2018.

A committed and supportive management, dynamic & dedicated faculties, caring and co-operative parents blend harmoniously to create a student-centric department. It is natural to find in this ambience, the intensive use of a variety of technical activities, strategies and group dynamics so that the classrooms & laboratories become alive. Even as we impart education to match the advancement in technology and globalization, we march our students ahead with APSIT's ethos of moral values and principles. We endeavour constantly to instil these qualities in our students. We feel proud to help them grow and develop into sensitive and responsible citizens of the next generation. Teamwork is the hallmark of Information Technology Department. I am very sure that collaborative effort we can achieve more to benefit our students who are the future leaders. I congratulate the entire editorial team for their hard work and dedication in making this dream come true.

Prof. Kiran Deshpande
HOD, Department of Information Technology

Vision

“ To be a prime centre of excellence by transforming students into globally competent IT professionals. ”

Mission

- To develop, support and maintain state-of-art infrastructure to serve as a potent resource hub for IT industries.
- To inculcate the problem solving, analytical, logical skills and to promote the culture of creativity and innovation among the students.
- To adapt with the transformation of the technology emphasising on inter-disciplinary studies, exposure to emerging technologies and imbibing high standards of professional ethics and social responsibilities in all endeavours.



Academic Achievers

Our students have added feathers to the department by securing excellent scores in University examinations. It's indeed a proud moment for the department and the institute.

Rank	Name	CGPI
1	Jyoti Tiwari	9.54
2	Yogendra Kokamkar	9.54
3	Manasi Ghadge	9.54
4	Pravin Jaiswal	9.40
5	Varsha Naik	9.30
6	Ankita Deshmukh	9.00
7	Sudama Jaiswal	8.92



SE-IT



TE-IT

Rank	Name	CGPI
1	Amisha Karia	9.69
2	Isha Owalekar	9.54
3	Namrata Joshi	9.23
4	Amit Prajapati	8.90
5	Samrin Baig	8.85

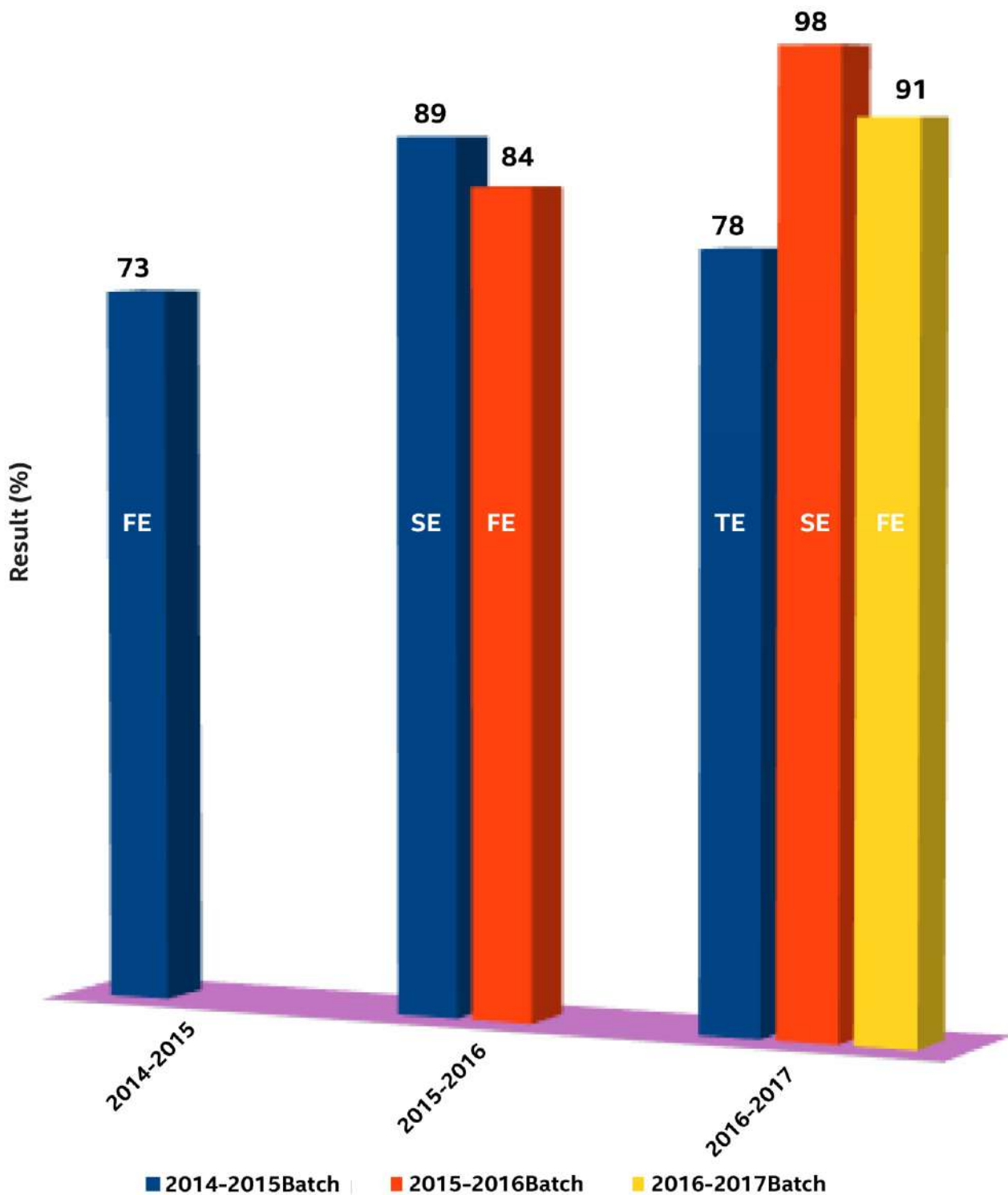
Rank	Name	CGPI
1	Vishal Singh	8.93
2	Anupama Mishra	8.70
3	Minaz Shaikh	8.48
4	Harsh Vitra	8.44
5	Samiksha Kadu	8.04



BE-IT

Result Analysis

Department is said to thrive when the faculty and student produce results that are visible. We honor the academic achievements of students, who have excelled in their endeavors and we are immensely proud of their success. This has been possible because of smart, innovative teaching methodologies & time intensive planning & efforts put in by Faculties and Students.



Achievements

Students as well as faculty members have been constantly working towards excellence and have earned pride for department.

Student Achievements



Mr. Ali Mustafa, Mr. Amit Prajapati, Mr. Rikesh Kamra, Mr. Saurabh Kolambkar and Ms. Amisha Karia secured 2nd rank at Tantragyan 17, national level project competition held at LTCOE, Navi Mumbai.



Mr. Harsh Vitra, Mr Ankit Gupta, Mr Rikesh Kamra from IT department and their team secured 1st rank at Abhyantriki, held at KJ Somaiya College of Engineering, Mumbai.



Ms. Sonam Chavan won Bronze Medal in Taekwondo at Intercollegiate Tournament organized by Mumbai University.



Ms. Amisha Karia, Ms. Lavina Budhwani, Mr. Amit Prajapati and Mr. Shankarlal Sharma won 2nd Prize for technical poster presentation in Exalt 2017 held at APSIT, Thane.

Mr. Dilesh Tanna won 1st Prize in project competition held at New Horizon Institute of Technology and Management.



Mr. Shreyas Chaudari and Ms. Shrutika Walekar won 1st Prize for Paper Presentation in Exalt 2017 held at APSIT, Thane.

Mr. Harsh Vitra, Ms. Minaz Shaikh, Ms. Akshada Thombre and Mr. Vishal Singh won 2nd Prize for Paper Presentation in Exalt 2017 held at APSIT, Thane.



Student Achievements



List of students who have published papers under the guidance of faculties in International Conference (ICSCET) at Universal College of Engineering

- Ms. Amisha Karia and Mr. Lavina Budhwani- "IoT-key Towards Automation"
- Mr. Amit Prajapati and Mr. Shankarlal Sharma- "All about Cloud A Systematic Survey"
- Mr. Shreyas Chaudhari and his project group- "A secure cloud computing based framework for Blood Bank"
- Mr. Anirudh Patil-" A Comprehensive Survey on Theoretic Perspective Providing Future Directions on IoT"
- Mr. Yash Naik and his project group- " Integrated Framework for Digitized Stay "

Faculty Achievements



Prof. Rahul K. Ambekar has been awarded PhD in Computer Engineering from Pacific Academy of Higher Education & Research University, Udaipur under the guidance of Dr. Uttam Kolekar.

Prof. Vishal Badgujar has published a book titled - "Intrusion detection system in Wireless Sensor Network : Comparison of different IDS Schemes" with Lambert Publication.



List of faculties who have attended STTP

- Prof. Anagha Aher on "Programming with Python & R" at TSEC, Bandra.
- Prof. Nahid Shaikh on "Developing IOS App with swift" at VJTI, Mumbai.
- Prof. Vishal Badgujar on "Open Source Technologies for Engineering Education" at DBIT, Mumbai.



Workshops & Student Enablement Initiatives

Department believes in progressive approach. To help the students in coping with emerging trends & technologies, department has provided a platform where students are made industry ready through various student enablement programmes.



Drupal Campus Ambassador Program (Drupal CAP)

The Drupal CAP was arranged on 17th June 2017 in association with Drupal Community Mumbai and Drupal Community Pune. The course consisted of the use of Drupal to mix and match various components to enhance its core abilities or integrate drupal with external services and other applications.

3 Days Workshop on Cloud Computing

Department organized the workshop on cloud computing from 19th June to 21st June 2017. Prof. Bhushan Jadhav was the trainer for this workshop. In this workshop students learnt about basics of cloud computing. Also students were given exposure to trending database technologies like Neo4j, Cassandra, PostgreSQL and MongoDB.



5 Days Workshop on Android Application Development

Workshop on Android Application Development was conducted in association with Aptech Computer Education from 26th June to 30th June 2017. Mr. Ashish Koth was the trainer for this workshop. In this session students got to learn about Android Studio, building applications using Android. The hands-on sessions helped students to explore Android Studio in detail.



3 Days training on Cross Platform Mobile Application Development

This workshop was arranged by department to provide exposure to students about mobile app development. Mr. Krunal Panchal from ATS Learning Solutions conducted this session where several applications were designed by students using HTML, CSS and JavaScript. Also SQLite connectivity and deployment of application using Cordova were performed by students under the guidance of Mr. Panchal.



Java Enablement Session

This session was arranged for students to have knowledge of Core Java technologies and application programming interfaces (APIs) using Java Platform, Standard Edition (Java SE). This session was conducted by Mr. Ashish Koth from Aptech Computer Education.



Expert Talks

Department strives hard to keep students well versed with recent trends in technology with a motive to bridge the gap between Academics and Industry, department has arranged various expert talks with experienced IT professionals for students benefit.



Expert Talk on "Exposure to Microsoft Web Development Framework" was conducted by Mr. Vinayak Narkar (Sr. Manager, ISGeSolutions Pvt. Ltd., Ghatkopar). In this session students were imparted basic knowledge about creation of basic website and it's working using .Net Framework.

Department of Information Technology, with a great insight to facilitate the students of SE IT and TE IT look beyond their horizon and choose the right Career path, organized an Expert talk on 16th November 2017. Mr. Sandeep Kuperker (Director, Ashnik Technology Solutions Pvt. Ltd. Mumbai) was the Chief Guest.

He guided our students and made them aware of latest trends & technologies in IT sector. He motivated and provided ideas to students to help them plan their career. With his vibrant words he conveyed students how staying focused to their goals will help them achieve their planned career & succeed in all aspects.



Events

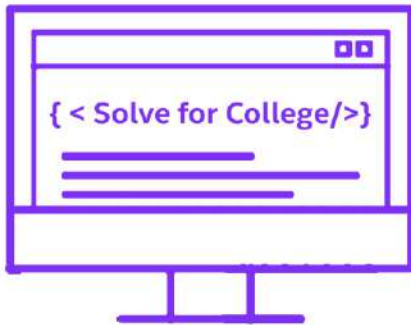
Drupal Enablement Session

(An initiative by the students for the students)



Our team of enthusiastic students which includes Mr. Ali Mustafa, Mr. Denis Vagasia and Mr. Ankit Gupta conducted one day hands on session as a part of student's enablement program for advanced Drupal training.

Hackathon



To boost the learning spirit & encourage students to use their knowledge to build something innovative department organised first ever Intra College Hackathon “Solve for College” on 17th and 18th March 2018. Students worked rigorously for 24 hours on theme development which marks the overall achievement of students, department and institute.

Farewell



It is a proud moment for us to see our students excel in their career. It's our First Batch to get awarded with the bachelor's degree. With mixed emotions we bid a memorable farewell to our BE students and hope for the best in their career.

Information Technology Students Association(ITSA)

ITSA was inaugurated and formed on 15th September 2016 with a motive of creating a bond among students and working towards departmental and personal excellence. It provides students opportunities to learn various technologies and team work ethics. ITSA emphasizes on development and enablement of every individual associated.



Information Technology Students Association(ITSA)

Mr. Utkarsh Naik

Co-ordinator

Ms. Jyoti Tiwari

Co-ordinator

Mr. Pravin Jaiswal

Co-ordinator

Computer Society of India(CSI)

CSI aims at facilitating research, knowledge sharing, learning and career enhancement among all categories of IT professionals. It also emphasizes on inspiring, new entrants in industry and helping them to integrate into IT community. CSI chapter has been started at APSIT in December 2016 as a combined initiative, Department of Computer Engineering & Information Technology has enrolled 34 students for CSI membership. CSI@APSIT is aiming at enrichment and empowerment of students by conducting regular value addition programs, technical workshops, industrial visits and international conferences.



Prof. Anagha Aher

Faculty Incharge(CSI)



Ms. Amisha Karia

Head



Ms. Ankita Deskmukh

Co-ordinator

Training & Placement Cell(TPC)

To help students in getting the best Industry opportunities our training and placement cell provides various training programs and placement opportunities. We strive hard for overall development of a students. Our students are placed in top-notch IT Core companies like Hexaware, HP.



Prof. Nahid Shaikh

Faculty Incharge



Mr. Amit Prajapati

Coordinator



Mr. Dilesh Tanna

Coordinator

Chintan Suchak

TPC Co-ordinator

Vedangi Naigaonkar

TPC Co-coordinator

Shankarlal Sharma

TPC Co-coordinator

Saurabh Sharma

TPC Co-coordinator

Debashish Chaudhari

TPC Co-coordinator



Students and faculties are upfront and eager to share their views on technology front. This section provides them a platform to share their knowledge and views on recent trends in technology and education.

AI on Smartphones to look out in 2018

- Mr. Prathmesh Pande (SE IT)

The article gives us the view about how smartphones with AI will play a major role in today's world. The article gives us the benefits of using AI on smartphones.

Camera

Using AI, the phone's camera interface can detect the subject in the camera frame (eg. landscape, fireworks etc.) and accordingly adjust the settings for the best possible image.

Language Translator

With onboard AI, your phone will be capable of translating different languages in real-time without the need of an

Internet connection.

Voice assistants

Voice assistants like Google Assistant (Android), Siri (Apple), Amazon Alexa and Cortana (Microsoft) use AI to identify what you say and respond.

Dedicated Hardware for AI

Smartphone vendors even went as far as developing a dedicated processing chips for AI processing, like the Pixel Visual core in Google Pixel 2/2XL and Neural-network Processing Unit (NPU) in Huawei Honor View10.

Data Analytics

- Ms. Namrata Joshi (TE IT)

The article gives us the information about data analytics. It is a key used for making business decisions. Basically in the organizations and enterprises that analyse data from different sources using Big Data Management solutions use data analysis to transform data. This information (data) is used in supporting some decisions and suggesting some conclusions. Data analytics applies

principles to the analysis of large, complex data sets, etc. Data analysis involves asking questions about what happened, what is happening, and what will happen in the future. It is generally the crunching of data, question-answering phase leading up to the decision-making phase in the overall Business Intelligence process. The ability to analyse data is a powerful skill that helps you make better decisions.

Games and More...

- Mr. Rohan Shah (TE IT)

The thing that intrigues everyone no matter what age 'GAMES'. Video game programming is a whole different ballgame. The paradigm of game development is different, a bit complex I must say but quite variant and interesting.

I still remember playing my first game MARIO and dreaming of how one day I was going to become a famous game developer and not just a gamer. This is how my game development journey started.

My approach was simple, gather all the required information from the internet and other sources, select an engine for my game and start developing process.

From a variety of Rendering Engines available I choose Unity as my Game's rendering engine. Referring tutorials online within a span of 1 month I successfully managed to develop a 2d game and damn I was happy. After all those sleepless nights and constant debugging finally I had developed a game of my own. Some problems that I faced:

1. Animation is a pain. This is the most boring part, designing sprites and aligning them for new frame each time.
2. Managing all the user resources and making sure everything is crafted carefully for the perfect user experience.

How to create MCQs based on Bloom's Taxonomy

- Prof. Vishal Badgajar

Bloom's Taxonomy acts as an efficient tool in bringing up the development of students during their curriculum. It help faculties to check the ability and understanding of the students. Therefore it plays a major role to contribute towards their development and progress.

Certain rules which can be used for generation of MCQ's are follows. These rules are adopted from Haladyna & Downing (1989).

1. Balance the keywords- (Don't use too many of them).
2. Avoid complex multiple choice items.
3. Length of the response options must be fairly consistent.
4. Avoid grammatical clues. For example, use a/an & not just for the correct answer.

5. Use of humor should be avoided while developing the options.
6. Keep the conception simple.
7. Avoid using negative phrases in the statement.
8. Avoid the use of "None of the above" and "All of the above".

Advantages

- Easy to score.
- Time required is less.
- Can be tapped into different cognitive levels.

Disadvantages

- Cannot be tapped into higher levels of learning.
- They are open to misinterpretation.
- It can be a time consuming process to generate good questions.

Machine learning approach to protect our naval vessels

- Prof. Sonal Jain

It is rarely known fact to the people that how our naval protection system works. Basically the ships and submarines produce magnetic field in all three directions. These small disturbances called signatures are detected by magnetic mines which explode our naval vessels. Thus our protection mechanism should be based on concrete mathematical modelling and proven results instead of some hit and trial methods. The magnetic protection system includes the process of degaussing and deperming where artificial coils are installed inside the vessel which currents in opposite direction. The major challenge is to find out exact amount of input currents. The best way to target this problem is to predict the model using various machine learning algorithms. With the trending technologies in the Information Technology, the development

of models is motivated to predict the ferromagnetic signatures of surface ships and submarines. Automatic model-building algorithms are familiar such as Forward Selection, Backward Elimination, inverse modelling, least angle regression (LARS), emerged as practical tools. These magnetic ship signature modeling techniques are used today in designing optimized signature reduction systems that have a minimum impact on ships and their systems. Due to the lack of computational capability earlier, the machine learning techniques and artificial neural network now plays a vital role in prediction and optimization of appropriate solution. Advancements in highly computational algorithm and faster numerical processing led to improvements in designing an efficient protection system for naval vessels.

Elastic Stack

- Prof. Anagha Aher

Elastic Stack is a group of open source products from Elastic designed to help users take data from any type of source and in any format and search, analyze, and visualize that data in real time. Elastic Stack can be deployed on premises or made available as SaaS.

Elastic Stack components:

Elasticsearch is a RESTful distributed search engine built on top of Apache Lucene and released under an Apache license. It is Java-based and can search and index document files in diverse formats.

Logstash is a data collection engine that unifies data from disparate sources, normalizes it and distributes it.

Beats are "data shippers" that are installed on servers as agents used to send different types of operational data to Elasticsearch.

Kibana is an open source data visualization and exploration tool from that is specialized for large volumes of streaming and real-time data. Elastic Stack presents a steeper learning curve than some comparable products, as well as more set up, owing in part to its open source nature.

Upcoming

We are pleased to announce the official launch of department magazine entitled "Technophila" in the month of July 2018. Technophila is a medium to communicate the various initiatives and activities conducted by department in detail.

Upcoming Articles

1

Article on "Blockchain"
- Mr. Dhananjay Yadav

2

Article on "Cloud Computing And Its Benefits"
- Mr. Shankarlal Sharma

3

Article on "Bloom's Taxonomy"
- Ms. Amisha Karia & Mr. Amit Prajapati

4

Article on "Blue Button"
- Mr. Yogendra Kokamkar, Mr. Viranchee Patil & Mr. Sameer Dev

5

Article on "Internet of Thing"
- Ms. Lavina Budhwani

6

Article on "The Need & Scope of Big Data, Data Analytics & Data Science"
- Ms. Isha Vikas Owalekar

7

Article on "Security"
- Mr. Dilesh Tanna

You can mail your creative inputs at itdept@apsit.edu.in



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Information Technology*

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