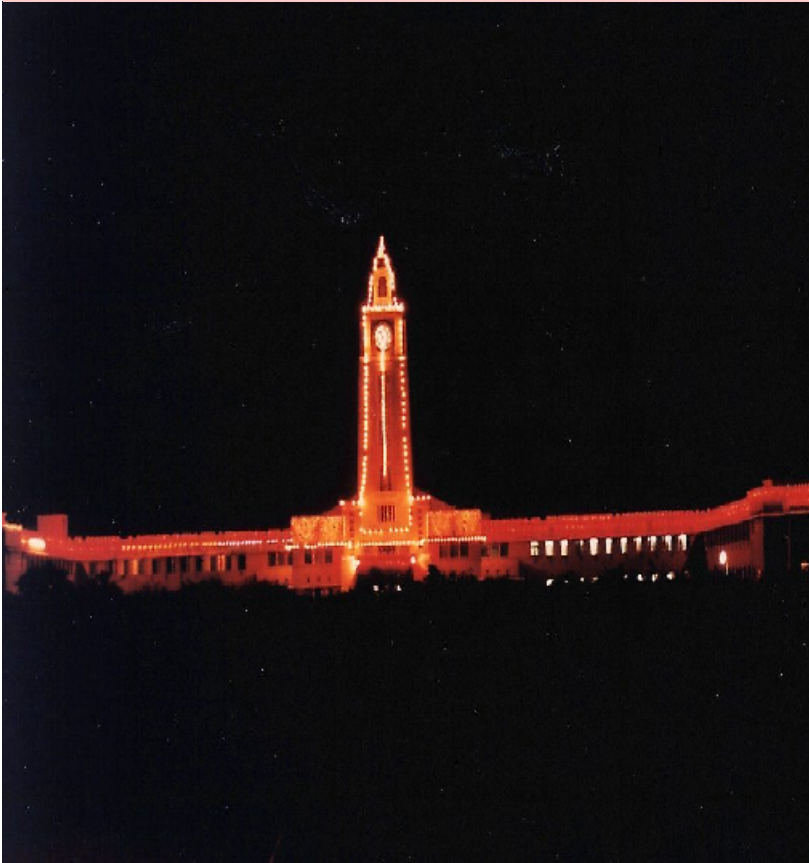


BITScan

Semester Notes



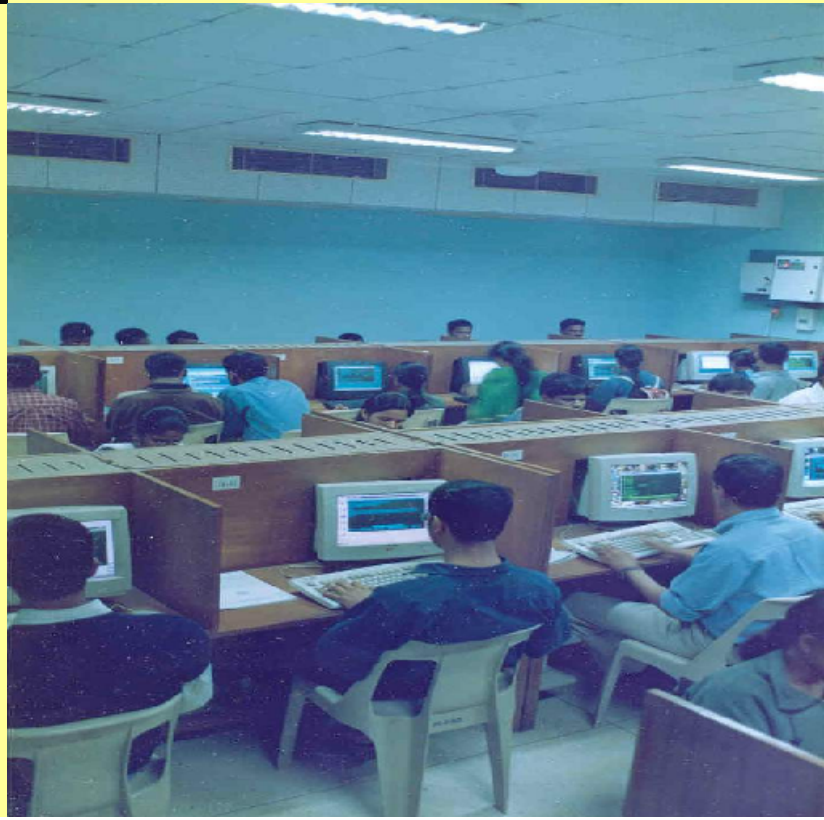
**BIRLA INSTITUTE OF TECHNOLOGY
AND SCIENCE**

**Pilani – 333031
Rajasthan**

S e m e s t e r I , 2 0 0 2 - 2 0 0 3

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AN EVENTFUL SEMESTER

From sizzling August to icy December, it has been yet another eventful semester for BITS, Pilani. If whiz-kid and acclaimed author of Ethical Hacking, Ankit Fadia, mesmerized the students with his brilliance, then one of India's best known percussionists, Anandan Svamani, bowled the audience over with his performance at the annual cultural festival, OASIS.



BITS hosted the Asian Regional Workshop on “*Improving Mobility for the Poor: Achieving Sustainable Motorised and Non-motorised Rural Transport*” sponsored by the World Bank. Descendents of the famed Ustad Ghulam Ali Khan enchanted the BITSIAN audience with their Hindustani vocal recital.

BITS's tryst with development has not been confined to the reaches of Pilani alone; in its quest to spread excellence, strides have been made towards setting up an extension centre at Goa in addition to the one at Dubai. As always, the institute has actively conducted a large number of seminars, workshops and conferences this semester. Covering a wide range of

topics – from Rural Development to Biotechnology, these events facilitate the exchange of ideas and expertise. Our faculty members too have actively participated in such events outside the institute, both in India and abroad, while a large number of them have had publications in various journals, national and international.

ACADEMIA

A Confluence Of Ideas

Some of the prominent **conferences**, **seminars** and **workshops** conducted by BITS this semester are described below.



Towards Greater Rural Mobility [International Workshop]

The Asian Regional Workshop on “*Improving Mobility for the Poor: Achieving Sustainable Motorised and Non-motorised Rural Transport*” (23-26 September, 2002) was organized by BITS in association with the **National Forum Group (Rajasthan)** and the **Department for International Development (DFID), UK**, and sponsored by the **World Bank**. There

were participants from India, Bangladesh, Sri Lanka, Nepal, Kenya, Namibia, the UK, the Philippines, New



Zealand and Switzerland. This 4- day long workshop aimed at finding feasible solutions to rural transport problems and was coordinated by Prof. A.K.Sarkar .In a letter of appreciation to BITS, the **President of India** encouraged the delegates to “find creative and practical ways of building on existing experience, and adapting solutions to the transport needs of rural people.”

Virtual Biology

The Biological Sciences Group, BITS, participated in the **Second Virtual Conference on Genomics and Bioinformatics** conducted by the **North Dakota State University, USA** from September 24-26, 2002. BITS along with the Bioinformatics Department, University of Pune, represented the Asia-Pacific region. The conference provided an environment for the exchange and discussion of information related to innovations of the post-genomic era and featured high profile researchers and educationists working actively in the development of new applications in the area of genomics and bioinformatics. Unlike conventional conferences, participants around the globe logged onto the NDSU server in real-time and viewed the

presentations as streaming video. Thus the conference did not require the physical gathering of the participants at one venue.

Civil Engineering

The Civil Engineering Group organized a number of events. Among these was a seminar on **STAAD PRO Software Installation Demonstration and Training** (Aug 10, 2002), in cooperation with Reind, New Delhi, where the keynote speaker was Mr. Manvendra Singh. Dr. U.N. Sinha of CSR delivered lectures on **Geo-technical Ground Exploration – Subsurface Exploration and Soil Sampling** and **Geo-technical Considerations in Design of Foundation**. Faculty Seminars on **Non-destructive Evaluation and Study of Various Parameters affecting the Strength of Soil** (Mr Kamlesh Kumar) and **A study of water quality management for a river basin with special reference to fast purification and stochastic environment** (Mr Ajit Pratap Singh) were also conducted.

National Pharmacy Week

The Pharmacy Group celebrated



National Pharmacy Week from November 17 to 23, 2002.

The Week featured a series of lectures relating to the central theme of

Improving Access to Medicines Through Pharmacist, bringing together the institute's academic work and its work benefiting the community in the area of health-care. Lecturing on the *Role of Pharmacists in Healthcare* and expounding on the principles behind *Healing Techniques as Adjunct to Therapies* was Dr. R Mahesh, Group Leader, Pharmacy Group. Also featured were lectures on *Essential Drug Policy* by Dr. AN Nagappa and on *Domestic Poisoning* by Dr. PA Thakurdesai. The Pharmacy Group of BITS, Pilani has begun helping Health-Care in the area by providing services at the Medical Centre (OPD) and the Birla Sarvajanic Hospital (In-Patient Dept.) and has several plans to further the health services in the area.

Engineers' Day

Engineer's Day was celebrated on 16th September with Prof. L. K Maheshwari addressing the gathering on the occasion. The theme of this Day was *Indian Small Scale Industries in the Globalisation Scenario*. Prof. Ishwar Bhatt, Prof. Ravi Prakash and Prof. Nirupama Prakash, Prof. Surekha Bhanot gave lectures about Indian scientists and their contribution to the Indian science scenario. Several other faculty members and students representing various discipline associations also delivered talks on topics pertaining to the theme of this Engineer's Day celebrations. A booklet containing the life sketches of great Indian scientists and engineers was also released on this occasion.

Special Honour

On 12 August 2002, our Hon'ble Chairman, Dr. K.K. Birla was felicitated by the Sankaracharyas of Kanchi Mutt with the title *Vidya Seva Ratna* for his invaluable contribution to the field of education.



On this momentous day Dr. Birla in his address, announced the opening of a new centre at Goa by BITS during the academic year 2004-2005.

Achievements

Some of the achievements of faculty members of the institute during the semester are detailed below:

- Dr. S.P. Gupta of the Chemistry Group was the Editor-in-chief of International Journal of Current Medicinal Chemistry–Cardiovascular and Haematological agents.
- Dr. Rahul Banerji, Prof. Nirupama Prakash, Dr. Ram Kinkar Roy, Prof. A.K Sarkar and Dr. BV Babu, attended conferences/symposia abroad and presented papers on their respective areas



of specialization.



- Dr. Meenakshi Raman and Dr. Sangeeta Sharma were Guest Editors of the International Journal of Communication.
- Dr. B.V. Babu was the Expert Reviewer for research articles in six international journals, namely Computers and Chemical Engineering, International Journal of Heat and Mass Transfer, European Journal of Operations Research, Industrial and Engineering Chemistry Research, Waste Management and International Journal of Environmental Pollution.
- The Institute has ongoing projects with national and

international collaborations in the following areas: Pharmacy, Biological Sciences and Software Development led by Dr. RN Saha and Dr. R Mahesh, Dr. SK Verma and Dr. Rahul Banerjee.

To name a few: Desktop Video Conferencing for IPv6 capable internetworks – Ekayana, Development of Biosorption Technology for Nuclear Waste Treatment and Community Pharmacy and Clinical Pharmacy at Pilani.



- Prof. Rajiv Gupta was awarded the Srimati Saroma Sanyal Memorial Medal by the Institution of Engineers.

In Print

Keeping aloft the institute's high standards of academic literature, the instructors at BITS had publications in various journals of National and International repute, ranging from the *International Journal of Molecular Science*, *Indian Journal of Pure and Applied Mathematics* and the *International Journal of Communication* to the *IEEE*

JOINING HANDS..

Practice School

The adage, 'practice makes a man perfect' couldn't have been more relevant than in the case of BITS. The practice school programme that BITS has been successfully running since 1973, bears testimony to the fact that the educational reform of linking university training with industry has been central to the BITSan pedagogical philosophy. The Practice School method of education adopted at BITS creates an environment that requires the students to undergo the rigour of the professional world in form as well as in substance, thus providing them an opportunity to apply their classroom knowledge to real life situations. The programme has grown from strength to strength since its inception in 1973. It now has more than 800 students, 50 faculty members and over 90 participating host organisations across India and abroad.

The semester saw the opening of many new stations that include Infineon Technologies AG (Munich Germany), The Department of Informatics and Telecommunication (University of Trento, Italy), Centre for DNA Fingerprinting and Diagnostics, Hyderabad, Convergent Technologies, New Delhi, Avedis Microsystems, Bangalore and so on. The institute also plans to initiate collaborations with other such international organisations

so as to provide a global work experience to the students. This pioneering effort of institutionalising the industry-university linkage process has won BITS rich accolades from the media.

"An outstanding experiment in the realm of industry-institution linkage has been going on for several years in Indian companies. This is the P.S programme of BITS located in Pilani Rajasthan." (The Hindu)

"BITS offers much better education than the IITs since the latter has to operate within a government strait jacket leaving no room for creativity and experimentations" (Business Herald)

Distance Learning

The educational activities of the institute have extended beyond the campus. Since 1979 it has been participating in the human resources development activities of the industries and in 1988 it launched its distance learning programmes, whereby it



conducts off campus degree programmes as a means of continuing education for employed professionals. The programme now has nearly 10,000 registered students and more than 35 collaborative programmes in diverse fields ranging from science, engineering and humanities.

Under the purview of the Distance Learning Programme Division (DLPD), Memoranda of Understanding were signed with many universities and industry leaders. Prominent among them are the **Hogskolan i Boras** (University College of Boras), **Sweden**,



GE India Technology Centre, Bangalore, Wasada University, Tokyo, Japan and the B.V.Patel Education and Research Development Centre (PERD), Thaltej, Gujarat.

These MoUs emphasise the importance placed by the institute on joint research activities, exchange of students and faculty members, academic publication, scholarly information and scientific know-how.

RENEWING THE BONDS

Embodying the strong ties that bind Birla Institute of Technology and Science with its alumni is the BITS Alumni Association (BITSAA). With chapters in the UK and the US, among other places, and activities ranging from reunions to scholarship programmes, BITSAA has steadily expanded its horizons.

BITSAA International engages in



charitable and educational activities by raising funds for setting up endowments, creating scholarships, rewarding teaching and research and generally promoting the development of resources at Birla Institute of Technology & Science at Pilani. BITSAA International also aims to strengthen the ties, friendship and communications amongst former students, current students, faculty and friends of the Institute.

To further the BITSAA ties, our Director visited United States of America during August-September 2002. Our alumni in



New Jersey, Boston, Detroit and San Francisco extended a very warm welcome, shared reminiscences of their stay at BITS with him and had fruitful discussions.

In keeping with tradition, BITSAA organised the Director's Tea Party for outgoing students of the institute - the first step towards maintaining a relationship over the years to come.



Among the highlights of the semester was the Silver Jubilee reunion of the batch of 1977. The alumni returned to the nursery of their careers with families in tow. One could see them around the campus, reliving memories, chatting with current students, enjoying a midnight snack at the All Night Canteen, marvelling at the metamorphosis the campus has undergone while maintaining its essential character. The career counselling session organised for the students by these ex-BITSians was a huge success and made for a very enjoyable and useful afternoon.

ONWARD!

Among the developments marking the changing face of the campus are the Supermarket project (Akshay) and the ongoing new Library Project.

'Akshay'-Supermarket Success

The new supermarket that opened early in the previous semester has proved itself to be a great success, growing from strength to strength. It has, in fact, turned out to be the largest profit making cooperative store in Rajasthan.



Extremely well stocked with all the possible needs of the community on campus, it has proved to be very popular with students and faculty alike. Provisions, stationary, cosmetics, books- Akshay stocks all these. Not to mention the 'Intelligent PCO' facility and snack bar. For the benefit of residents of the campus, the products are sold at subsidized rates.

Students also have an opportunity to



serve the community and earn an honorarium by working in shifts, helping customers at the supermarket as part of the Earn While You Learn Programme (EWYLP).

New Library:

Sanc tum of Learning

Under construction is a massive new library building. The building will spread over 65,000 sq ft with a capacity for 750 students. Adorned with open terraces and beautiful spaces, it



would combine the current Central and Reference Libraries under one roof, with Internet connections as an integral part. Spaces for personal study have also been planned. The Rs. 3.18 Crore project is on its way to completion and promises to be the intellectual hub on campus.

SPREADING EXCELLENCE

Successfully entering its third academic year was BITS Pilani's international



center (BITS Pilani – Dubai Center) in collaboration with the Al Ghurair University, Dubai. The centre has been

in operation since September 2000, offering BS Degree Programmes, and is fully residential with hostel facilities.

In its quest for the furtherance of excellence, BITS is coming up with its latest extension centre at Goa. Spread



over a sprawling 170 acres near Zuari Fertilizers, Vasco, Goa, the campus is in the midst of natural beauty, providing a panoramic view of the beach. Adorning the campus are the Institute building, hostels, recreation centres, a guesthouse, a shopping complex and a temple. With a planned intake of about 600 students every year same flexibilities as available at Pilani shall be on the offer. The Rs. 97.3 crore project is nearing completion and promises to be another jewel in the crown of India's education system.

CARING BEYOND OUR WALLS

The National Service Scheme, BITS has always been the beacon of hope for the underprivileged in and around BITS. Semester activities of NSS started with World Peace Day on September 21. Hundreds of BITSians wore the peace bands on their sleeves to celebrate the day, raising visions of a new generation free from the shackles of violence. The National Literacy Day on September 24

was celebrated with a colourful performance by a troupe of trained school children and faculty from Surajgad Government School. Emphasis was laid on the advantages of hygiene, the need for education and evils of the dowry system.

The acute drought conditions forced farmers in Rajasthan, to disown their cattle. Therefore, Pilani Goshala took the responsibility of **looking after the animals. NSS took the initiative of collecting donation from the** residents of campus to help in the noble cause.

During Oasis 2002, the annual cultural festival, NSS set up a stall to sell handicrafts, pottery, and T-shirts among other things to generate funds for NSS activities.

Gyanganga

Gyanganga is an innovative and novel social development project that aims at 'Providing education in Jherli Gram Panchayat, Jhunjhunu'. Jherli Gram Panchayat consists of 3 villages situated within a radius of about 7-12 Kms from Pilani, with a population of more than 7000. In order to improve



the abysmal social conditions of the villagers, the team members contacted the ASHA for education, Yale Chapter, for partial financial funding of the project. The project was sanctioned in

August 2002 for a period of 3 years. The main objectives of the project are-

- To improve the quality of primary and secondary education.
- To impart professional education.
- Organise inter school competitions, debates, quizzes, sports etc.
- Provide women and children with health care.

BITS Pilani is involved in a similar kind of project in Basgaon, a village close to Pilani.

A media celebrity par excellence and an exponent of the **Swadeshi economics**, Sri S. Gurumurthy visited



BITS at the behest of NSS and BITS Staff Association to deliver a talk on "**Youth and Nation Building**". The talk followed by discussions was highly appreciated by both staff and students.

SPIRITUAL YEARNINGS

While pursuing technical proficiency, the campus is equally alive to the cultural and spiritual yearnings of its residents. The residents have formed groups that take the initiative to follow a healthy amalgamation of these with regular activities.

Shree Shree Durga Puja Celebrations

The Shree Shree Durga Puja celebrations at the Vidya Vihar Campus were organized by Sharadiya Utsav Samiti, Pilani, society created by a small group of Bengalis. One whole year of sustained effort, determination and small monthly contributions made way for the first Puja celebrations. Over the years, the Puja has become an important feature of cultural landscape of the campus. As part of the celebrations, young and old alike participated in various activities: drawing, fancy dress competitions, quizzes and the like.

Visit of His Holiness of Sri Ahobila Matham



His Holiness, the 45th Jeeyar of Sri Ahobila Matham graced the Campus with his visit from 21st October to 23rd

October 2002. (The Ahobila Matham is a Sri Vaishnava religious institution established 600 years ago in Ahobilam in present-day Andhra Pradesh by Srimad Athivan Satakopan.)

Public contributions were collected which were donated to the educational institution run by the Matham, like *Ved Pathshala*, Sanskrit College, etc. The programme included *Vishwarupa Darshan (Suprabhatam)*, *Swarnapushpa Puja* before the Shree Lakshmi Narasimha deity, discourses by His Holiness, evening Puja, *Arthi* and *Prasad* distribution.

Religion in the Modern World

A panel discussion was organised on



Religion in the Modern World on 19th November 2002. The participants were administrators, faculty members and students. An exchange of various significant ideas took place. The relevance of religion in the modern context, respect for all religions and the meaning of religion in its outer layer (rituals) and inner layer (divinity) were deliberated upon.

BOSM
CTIUS, ALTIUS, FORTIUS

The BITS Open Sports Meet, BOSM was held at the campus gym grounds from the 18th to the 22nd of September. 600 sportsmen and women from premier institutes all over the country took part in this annual event hailed



as one of the best inter-college sports meets of the country. BOSM consisted of almost all common track and field, aquatic, outdoor and indoor games.

The action, spread over five days, held everyone in its thrall. In the ever-popular floodlit basketball events, BITS enjoyed a successful run to finish as finalists. The swimming team also had a good showing. Cricket, football, hockey, table-tennis, tennis and the track and field events were also keenly contested. In the badminton court all eyes were on Nishad Dravid, India's No. 2 in the Under-19s. Powerlifting and chess were also featured, as was sports quizzes for the keen quiz bugs. While SBM Jain College walked away with an overall trophy, the event was, all in all, a true representation of the spirit of teamwork and sportsmanship that all BITSians treasure.

CREATIVE ZONE

The BITSan semester, as usual was



filled with a plethora of activities, reflecting the extremely creative and enthusiastic approach of the students. Clubs and Departments have been instituted to conduct creative activities through the semester. They span theatre, dance, music, painting, stage-building, trophy fabrication, literary and journalistic work among other things.

SPICMACAY

Like any college, BITS is a world unto itself. However, aside of the elements of urbanity that are nowadays commonplace, there is a great awareness and active practice of Indian culture. The BITS chapter of SPICMACAY brings to our lives a cultural focus and allows us an opportunity to enjoy and appreciate professional music and dance performances.

In the past eminences of the likes of Shubha Mudgal, Amaan and Ayaan Ali Bangash, Raja and Radha Reddy, Bombay Jayashree and others have graced the institute.

The first performance of the semester was on 17 Aug 2002 by Shanti Sharma an ex-BITSian Hindustani vocalist. Jawad Ali Khan and Mazhar Ali Khan, two Hindustani vocalists from the



legendary family of Ustad Ghulam Ali Khan, were on campus on September 1st 2002. Connoisseurs of instrumental



music had a field day on September 21st 2002 when Shubendra Rao, disciple of Pt. Ravi Shankar, mesmerized the audience with his sitar performance.

For the dance enthusiasts there was a graceful Manipuri dance performance on 26th September 2002 which saw a grand ensemble comprising Raas Leela, a priestess dance, a Tandav and a Lasya. The performers Padmashree Guru Singhajit Singh and Charu Sja Mathur portrayed the love story of Arjuna and Chitrangada.



The show stealer however was a puppet show entitled 'Lanka Dahana', performed by Kogga Kamath and troupe of the Shree Ganesha Yakshagana Gombeyata mandali of Karnataka, the



event was attended by more than 1000 BITSians.

SPIC MACAY has made the campus culturally alive, reinforcing the BITSian awareness of Indian classical fine arts.

OASIS - A SPLASH OF COLOUR

The 2002 edition of Oasis, the annual cultural festival, kicked off on October 23, 2002 and ran for 96 hours. Bearing the theme of "APOTHEOSIS- From Here to Eternity", Oasis was inaugurated in a blaze of brilliance, in a programme presided over by the Director, Dr. S. Venkateswaran eminent artist Shri Jatin Das as Chief Guest. Performances by the Dance Club and Mime clubs made for a



glorious beginning to what would be a veritable kaleidoscope of talent and creativity.

Over the next four days, nearly a hundred hours of competition, festivity and sheer revelry brought extra vibrancy to the campus. A record number of outstation participants (almost 700) enjoyed BITSian hospitality and ensured that the multitude of dance, music, art, theatre and public speaking events were well contested.

Among the highlights of Oasis were the Professional shows. On October 24, Piloni swayed to a different beat as ace percussion artist Anandan Sivamani, set the stage on fire. In a one-man show, with absolutely no accompaniments, this

maestro kept the audience on their feet and left them clamouring for more. The show by rock band Brahma was right up the alley of metal enthusiasts. Creed, Metallica, Deep Purple and Linkin' Park were some of the groups whose numbers were played. The atmosphere continued with the "Rocktaves" competition which saw the best amateur bands in India compete for the top spot.

Oasis also featured some more cerebral events such as the Oasis Quiz, the Audio-



Visual Quiz and Carpe Tome, a special quiz for book-lovers. Also well-contested with BITSian and outstation teams was Vox Populi, featuring hours of debating. Foot-tappers enjoyed Razzmatazz, the Western dance competition, while the BITS team catwalked to glory in the Fashion Parade. Crooners from far afield hit the stage with Andholika, the solo vocal competition.

Apart from these there were a multitude of other events such as Tarang (light Indian music), fusion music, Choreographed dance, street and stage plays, cartooning, clay modelling, photography etc. Events such as Antakshari, Filmi Muqabla, Tambola and dumb charades attracted large participation.

Among the informal events “Blind Date” as usual attracted the maximum response. The mega event Mr. and Miss Oasis saw outstation participants vie for the coveted titles at stake with full zest and enthusiasm.

The Art and Decoration structure in the middle of D-lawns, the stalls selling food and the National Service Scheme variety stall in M-lawns and the dance floor in S-lawns, and hundreds of participants

lounging together between events on the well-lit grass with steaming cups of coffee through the cool and competition-filled nights, were some of the unforgettable images of Oasis.

Despite several obstacles in various forms Oasis was conducted smoothly and was a great hit. This festival remains the greatest example of the potential of the students of BITS who conceptualize, plan, organise and execute it from scratch.



EDITORIAL ADVISORY BOARD: Dr. (Mrs.) Meenakshi Raman, Dr. (Mrs.) Sangeeta Sharma, Dr. Binod Mishra

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We wish to thank the staff and students of BITS who have helped us in procuring data and photographs.

BITScan (Semester Notes) is envisaged as a biannual magazine to be brought out chronicling some notable events of the previous semester in BITS, Pilani. This is the inaugural issue.

Please feel free to send your comments, suggestions or feedback of any kind to mraman@bits-pilani.ac.in

MEDIASPEAK

Here is what the media has to say about BITS Pilani:

“On the rankings scale its several technology-connected institutes that have made their mark with the recruiters BITS Pilani in fifth place.

In fact, at BITS, 27% of recruiters plumped for the good quality of the students as the reason for the high ranking.”

Times News Network

[FRIDAY, DECEMBER 20, 2002.]

INDIA TODAY – GALLUP Survey ranked BITS, Pilani as the 3rd best engineering college in India just behind two IITs. BITS got the highest ranking in the academic input and curriculum categories and was placed third in the job placement section.

[India Today, MAY 13, 2002.]

“BITS reigns as one of the leading universities in India, and one, whose certification is valued abroad. Hardly a surprise then, that ‘BITSians’ have an edge over others in terms of campus placements. Certainly, winning careers are made here.

“NSS, IEEE, seminars and various research and development wings provide students to practise what they learn.

Practice School (PS) is a particularly notable concept. It’s also a profitable trade off, students simultaneously learn and earn, while industries get to train and benefit from some of the most talented minds!

Placement opportunities for graduating students are many. HLL, Wipro, ITC, Motorola, Infosys and L&T are some of the top firms that come for campus recruitment.

What more can one may ask with an education from one of the top educational institutions in India? The future is secure and sky is the limit!”

The Hindu [JANUARY 8, 2002.]

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