

Date: 12-10-11

INDUSTRIAL VISIT (DIRECTORATE OF FORENSIC SCIENCE AND BISAG, GANDHINAGAR) REPORT

Class: 5th Information Technology Engineering

Date : 12-10-11

Contact Person Name (DFS): Mr. R.M.Gunna (Deputy Registrar)

Assisting Person at DFS: Mr. P.B.Patel & Mr. Damor Sir

Contact Person Name (BISAG):Mr. T.P.Singh (Director)

Assist Person at BISAG: Mr. Jayesh Amin & Mr. Kamlesh Makwana

Total Students: 43 + 2

Faculty Member: Bhavin Gurjar & Palak Jadeja

Travel Agency: Ashutosh Travels

Bus Number: GJ 3W 9834

We are started our journey at 5.45 am from Rajkot and returned at 02.15 am. Details are available in the below table.

Sr. No.	From	To	Start Time	End Time
1	Rajkot	DFS	5.45 a.m	11.30 a.m
2	Breakfast at Darshan	--	7.45 am	8.30 am
3	DFS Visiting Time	--	11.30 am	1.45 pm
5	Lunch Time at Black Pepper	--	2.00 pm	3.00 pm
6	Black Pepper	BISAG	3.00 pm	3.15 pm
7	BISAG(Visiting Time)	---	3.15 pm	4.30 pm
8	BISAG	Akshardham	4.30 pm	5.00 pm
9	Akshardham(Visiting Time)	---	5.00 pm	9.15 pm
10	Dinner Time at Honest	---	11.45 pm	12.45 am
11	Returned Rajkot		12.45 am	2.15 am

Directorate of Forensic Science

Prepared by:

Palak Jadeja
Lecturer
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- 45 minutes of presentation on overall activities.
- 1 hour of round of whole institute and in detail explanation of the same.

DFS, Gandhinagar – is a state-of-the-art laboratory of international repute.

Accredited by NABL, ISO/IEC 17025:2005 having following unique facilities.



- **Computer Forensics**
- **Brain Electrical Oscillation Signature Profiling**
- **Narco-analysis**
- **Polygraph Examination**
- **Audio Video Tape Authentication System**
- **Voice Spectrograph, Speech Lab**
- **Integrate Ballistics Identification System**
- **Computerized Petroleum Testing Facilities**

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- **Fully automated Alcohol Estimation System (GC-HS)**
- **FT-Raman, LC-MS, GC-MS, FT-IR for Narcotic/Explosive/Poisons Analysis.**
- **Computerized Photographic Image Analysis System.**
- **Video Spectral Comparator for Document**

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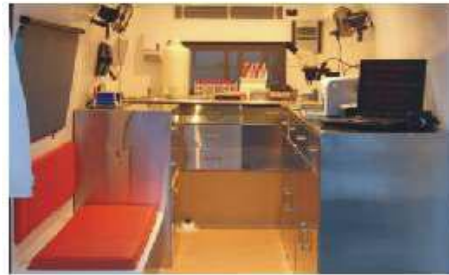
Examination.

- Accredited Cow-meat testing mobile

laboratories (4-numbers)

Crime Scene Management

30 Mobile Units with inbuilt sophisticated gadgets/kits are functional at each of the District Head Quarters of State. The expert reaches the Scene of Crime immediately and carries out on the spot scientific examination. Investigating Officers are assisted and guided for collection of important



clues and evidences.

Ballistics Division



Undertake examination of all types of firearms and ammunition and opines about the distance and angle of firing including the effective range of firearm. A unique 50 meter underground firing range is constructed for ballistic experiments. Division is equipped with comparison microscope and BDAS. Integrated Ballistics Identification System is installed for the creation of database of firearm signatures.

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Cyber Crime Laboratory



The Cyber Crime Unit is equipped with state-of-the-art facility for Cyber Crime Investigation, Portable data recovery unit, SIM card analyzer, Rainbow table, computer forensic system etc. This unit has assisted in investigating cyber crimes by retrieval of data from the hard disk, C.D. Rom, Floppy disk, Pen drive, Media card, data extraction from mobile phone, SIM card, damaged SIM card, detection of network crime and software piracy

Photography Division

Undertakes examination of recorded photographic images (analogue/digital) and acquisition products like camera, scanner etc. Individual Identification from available photographs is also made.

Wildlife Forensics

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Unique facilities for investigation of wildlife crimes have recently been established which include biological examination, serological examination, DNA profiling, ivory testing etc. For providing round the clock assistance to the wildlife crime investigators, a fully equipped mobile laboratory for on the spot testing of meat and other biological materials is being established at Sasan Gir Forest area in the district of Junagadh.

Documents Division



Undertakes examination of questioned documents such as hand writing, signatures, stamps, erased writing, alteration, addition, typewriting etc. using VSC 5000, Stereo Microscope, ESDA. Digital Imaging system is used to keep record of the documents digitally for further examination.

Chemistry/Explosives/Narcotics Division

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The Department is equipped with GC-MS, GC-HS, LC-MS, FTIR, UV Spectrophotometer, Auto distillation/Flash point/Viscosity apparatus, FT-Raman etc. They divisions undertake the examination of all drugs covered under NDPS Act, Explosive materials and Petroleum products.

Blood Alcohol Division



Undertakes examination of blood samples drawn under Prohibition Act for determination of ethyl alcohol using fully automated GC-HS technique. The technique analyses 300 blood samples every day.

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Toxicology Division

Undertakes examination of viscera, urine, blood and vomit samples for the detection & identification of poison to determine the cause of death in cases of unnatural deaths. Urine & blood samples of surviving victims are also analyzed to help the Doctor to decide the antidote.

Biology Division

Undertakes examination of samples like Blood, Sweat, Semen, Hair, Teeth, Saliva, Bones etc. Vegetative materials and the cases of Food Poisoning are also examined using instruments like Compound Microscope, Comparison Microscope, Comparison Microscope, Microtome,



Lyophilizer, Laminar Air Flow, Kits to identify Pathogenic Food Poison Causing Microorganisms, incubator etc. in various crimes like murder, attempt to murder, rape, disputed paternity/maternity etc. The Division has developed Video graphic technique of super imposition technique to establish identity of a person.

DNA Division

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Undertakes examination of body fluids like blood, urine, semen, saliva, bones, teeth, hairs etc. for getting DNA profiling for personal identification using instruments like DNA Sequencer, PCR etc. in various crimes like disputed paternity/maternity including murder, rape etc.

Fingerprint Division



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Undertakes examination of Finger print/Latent print using Automated computerized Finger Print identification System. A database of approx. 18 lacs fingerprint images are created for online comparison.

Psychology Division

Civil and criminal cases referred by investigating agencies and jurisdictional courts comprising of complainants, suspects, witnesses, accused and victims are taken for examination. Division is equipped with conventional and computerized polygraph instruments, psychological test materials for personality and psychological profiling, EEG/ERP instruments for recording of brain signature profiling, Minor Operation Theater facility for performing narco analysis/hypnosis and testing cubicles for examining civil and criminal cases.



Bhaskaracharya Institute For Space Applications and Geo-Informatics, Gandhinagar.

INTRODUCTION

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BISAG, formerly known as Remote Sensing and Communication Centre (RESECO), has been renamed after the great Indian Mathematician of the 12th century, "Bhaskaracharya"

BISAG is a State level nodal agency to facilitate the use of spatial and geo-spatial technologies for the planning and developmental activities pertaining to Agriculture, Land and Water Resource Management, Wasteland/Watershed Development, Forestry, Disaster Management, Infrastructure and Education.

The Institute started its operations in April 1997 and was renamed as " Bhaskaracharya Institute for Space Applications and Geo-informatics " in December 2003.



ACTIVITIES

Satelite Communication: To promote and facilitate the use of satelite broadcasting network for distant interactive training, education and extensions.

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Remote Sensing Applications: For inventory mapping, developmental planning and monitoring of natural and man-made resources.

Geo-informatics System: To conceptualize, create and organize multi-purpose common digital database for sector and thematic applications for various user.

Photogrammetry: For creation of Digital Elevation Model, Terrain characteristics, Resource planning etc.

Global Navigation Satellite System and Land Survey: For Location based services, Geo-referencing, Engineering Applications and Research.

Disaster Management: To Prepare geo-spatial information to provide necessary inputs to Government to assess and mitigate damage in the event of disaster.

Software Development: To provide low-cost Decision Support System, Geo-informatics applications (desktop as well as web based) to user for wider usage.

Technology Transfer: To transfer technology to a large number of end users.

Value Added Services: To provide tools which can be customized as per the needs of the users.

Education, Research and Training: To provide education, research and training facilities to promote a number of end users through Academy for Geo-informatics.

Best Wishes

From:

Prof H M Nimbark
Head,
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