



Institute of Engineering & Technology
JK Lakshmipat University
Jaipur

Report of Lab Audit

Date: May 28, 2016

A meeting of Lab Audit team was scheduled on May 17, 2016 to set the procedures to pursue the audit. Following members were present.

- Dr. Sonal Jain, Chairperson
- Dr. Vipin Jain , Member
- Prof. Gireesh Kaushik, Member
- Prof. Yogesh Rohilla, Member
- Prof. Divanshu Jain, Member
- Mr. Anurag Sharma, Member
- Mr. Mukesh Kumawat, Member
- Ms. Swati Mishra, Member

Mr. Kamal Punjabi and Prof. Vishal Singhal sought leave of absence due to their engagements.

A team comprising of two members were formed to audit each lab as shown below. Parameters based on which auditing is to be done were fixed, like Availability of equipment, its entry in Stock register, Working condition of equipment, its usage, if not in use its reason, list of instruments which require maintenance, usage of each consumable, organization of lab equipments', Lab Incharge's response for each equipment and other department specific parameters. Accounts team which includes Mr. Anurag Sharma, Ms. Swati, Mr. Mukesh Kumawat and Mr. Kamal Punjabi were asked to verify purchase orders with the stock registers. Audit was pursued between 17th May 2016 to 20th May 2016.

Sr. No.	Department Name (To be Audited)	Team for Audit
1	Department of Physics	Dr. Anurag Tiwari Prof. Gireesh Kaushik
2	Department of Chemistry	Dr. Anurag Tiwari Prof. Gireesh Kaushik
3	Department of Electrical Engineering	Dr. Anurag Tiwari Prof. Gireesh Kaushik

4	Department of Mathematics	Dr. Vipin Jain Prof. Vishal Singhal
5	Department of English	Dr. Vipin Jain Prof. Vishal Singhal
6	Department of Computer Science Engineering	Dr. Vipin Jain Prof. Vishal Singhal
7	Department of Chemical Engineering	Dr. Shahnawaz Khan Prof. Divanshu Jain
8	Department of Mechanical Engineering	Dr. Shahnawaz Khan Prof. Divanshu Jain
9	Department of Civil Engineering	Dr. Vinod Jeenager Prof. Yogesh Rohilla
10	Department of Electronics Engineering	Dr. Vinod Jeenager Prof. Yogesh Rohilla

As Dr. Anurag Tiwari was on leave, he was replaced by Mr. Vishal Singhal for Department of Physics and and Department of Chemistry and with Dr. Shahnawaz Khan for Department of Electrical Engineering. Each team worked with zeal and co-ordination and regularly interacted with undersigned in case of confusions and unclear situations.

Enclosed is the Summary report of each Department prepared by the team for each Department.

Department of Physics

1. Two items were found damaged in the lab – 1 unit of Table lamp and 1 unit of galvanometer (30-0-30).
2. Except above two items, all the items mentioned in the sheet (attached with the minutes) were found in working condition in lab.
3. Auditors also verified the sheet provided by Lab representative with stock register available in the Lab.
4. Stock register contains entries of the items damaged during flood but are not available in the lab as they have been deported in scrap.

Department of Chemistry

1. Digital conductivity meter model: 611 – Existing quantity was 15 out of that 13 were in working condition and 2 were found damaged.
2. Digital Flame Photometer - Existing quantity was 5 out of that 1 was in use and 4 were unused.
3. Digital pH meter model: 112 – Existing quantity was 15 out of that 14 were in working condition and 1 was found damaged.
4. Red wood viscometer No. 1 model RAP-101 - Existing quantity was 15 out of that 9 were in use and 6 were unused.

5. Stop Watch - Existing quantity was 15 in stock register out of that 8 were available in lab. The stopwatches were not working due to discharged batteries.
6. Stirrer 1/20HP with regular model PLT184 - Existing quantity was 3 out of that 1 was in use and 2 were unused.
7. The Stock register was also verified by the team with the apparatus available in the lab.

Department of Chemical Engineering

1. Lab mass transfer operation (room no. 011, new lab block):

All the equipment are in working condition except the refractometer because it is newly purchased and not installed. A Glass of condenser is damaged in vapor liquid equilibrium setup. Details of other consumable items are given in audit sheets.

2. Mechanical operations (room no. 006, new lab block):

All the equipment are in working condition and one measuring cylinder of 1000ml & one measuring jug of 1000 ml is missing. Details of other consumable items are given in audit sheets.

3. Heat transfer operation (room no. 106, new lab block):

All the equipment are in working condition except Finned Tube Heat Exchanger because of blockages in pipes.

4. Process dynamics and control (room no. 107, new lab block):

All the equipment are in working condition.

5. Chemical reaction engineering (room no. 101, new lab block):

All the equipment is in working condition. One bottle of Specific gravity 10 ml is damaged. One pipette of 10 ml and one conical flask of 100 ml is broken. Details of other consumable items are given in audit sheets.

Department of Civil Engineering

The audit of CE department has been done by Prof. Yogesh Rohilla and Dr. Vinod Jeenager on May 20, 2016. There are total 9 labs in this department.

1. Concrete Technology Lab (NLB-003)

There were total 91 equipments in this lab. Out of these 91 items 83 were in good condition and 90 are in use. Observations are:

- a) 'Rockwell cum Bridell Hardness Testing machine' was working fine but not in use.
- b) 'HOS Electronic Balance, Capacity 20Kg, readability 1gm accuracy' was showing error in reading.
- c) 'Hot Air Oven Electrically Operated Thermostatically Controller' was not working.
- d) 'HOS Le Chatelier Flask' - out of 2, 1 was in good condition whereas other was broken.
- e) 'HOS Measuring Jar (100 ml)' - out of 2, 1 was in good condition whereas other was broken.
- f) 'HOS Measuring Jar (250 ml)' - out of 2, 1 was in good condition whereas other was broken.
- g) 'Pycnometer' - out of 2, 1 was in good condition whereas other was broken.
- h) 'Water Bath Electrically operated and thermostatically controlled' was not working due to damage of its electric rod.

2. Geotechnical Engineering Lab (NLB-002)

There were total 35 equipments in this lab. Out of these 35 equipments, 31 were in good condition and all were in use. Observations are:

- a) 'AIM-046 Pycnometer'- out of 3 pieces 2 were broken.
- b) Out of 2 'Khurpi' 1 was damaged and other was misplaced.
- c) Out of 8 'Porcelain evaporating dish', 1 was damaged.
- d) 'Soil Hydrometer ASTM range 5-6'- out of 5, 2 were not in working condition.

3. Fluid Mechanics Lab (NLB-001)

There were total 11 equipments in this lab. Out of these 11 equipments, 10 were available in lab but were in poor condition. Total 10 apparatus was in use. Observations are:

- a) 'Apparatus for Mouth Piece Experiments' was not in lab at the time of audit.
- b) Out of 3 'Stop Watch', only two are working.

4. Environmental Engineering Lab (NLB-110)

There were total 23 apparatus in this lab. All were in use. Except form these 23 apparatus, all other items were of consumable category. Observations are:

- a) Installation work of the lab is still in progress. So all the apparatus were arranged in a poor manner.
- b) One device 'Respirable Dust Sample Environtech Model APM 460' were out for field test.
- c) Entry of 'UV Spectrophotometer UV 1800' were not in stock register at the time of audit.

5. Surveying Lab (NLB-109)

There were total 19 apparatus in this lab. All were in use. However, some items were not available or damaged. Observations are:

- a) From 18 sets of 'Arrows', 1.5 set were missing.
- b) From 6 'Prism Square', 4 were damaged.

6. Transportation Engineering Lab (NLB-109)

There were total 21 items/apparatus (3 consumable + 18 non-consumable) in this lab. All were in use. Observations are:

- a) Needle of 'AIM-531 Standard Tar Viscometer, Electrical Heating' was broken.
- b) Consumable items were almost 10 % left.

7. Engineering Geology Lab (NLB-003)

There were total 7 apparatus in this lab. All were in use. However, some items were misplaced/not available in the lab. Observations are:

- a) Out of 80 'Hand Specimen of Minerals, Size 3" Approx. Laminated & Printed Label', 79 were present in the lab at the time of audit.
- b) Out of 45 'Hand Specimen of Rocks, Size 3" Approx. Laminated & Printed Label', 1 was not present in the lab at the time of audit.

Department of Computer Science Engineering

An audit of different laboratories of Department of Computer Science, Department of Language, Department of Mathematics was done by Dr. Vipin Kumar Jain and Prof. Vishal Singhal, Members of Lab equipment audit Committee on Wednesday, May 18, 2016. Linux Lab, Compiler Lab, Networking Lab, Language Lab, and Simulation Lab were audited.

Audit team interacted with Prof. Devendra Bhavsar, Mr. Vikrant Sharma, Mr. Sunil Saini, Mr. Hemant Kumar during the audit process. Observations are as follows:

1. Linux Lab

- i. One monitor was not functioning properly.
- ii. Projector (Make: Panasonic) was found instead of Sanyo as defined.
- iii. Separate Stock Registers as prescribed by the University for consumable/Non-consumable items were not prepared.

1. Compiler Lab

- i. 8 GB RAM was found in Lenovo PC (PGP6279) instead of defined 6 GB RAM.
- ii. 2 GB RAM was found in HP Compaq PC (INA236P306) instead of defined 6 GB RAM.
- iii. Lenovo TFT (3CQ5172ZGL) was found in place of defined HP Compaq (6CM2270B00). It might be swapped with machines utilized at other destinations of the University as mentioned by lab In-charge.
- iv. Projector (Make: Panasonic) was found instead of Sanyo as defined.
- v. Separate Stock Registers as prescribed by the University for consumable/Non-consumable items were not prepared.

2. Networking Lab

- i. 35 Atrus Thinkclient (Make-Atrus), 07 Desktop (Make-HP) and 01 Projector (Sony) were found in the lab.
- ii. Separate Stock Registers as prescribed by the University for consumable/Non S consumable Items were not prepared.

3. Language Lab

- i. 28 Headphones were found in the laboratory. Out of them, 13 headphones were damaged.
- ii. Separate Stock Registers as prescribed by the University for consumable/Non-consumable items were not prepared.

4. Simulation Lab

- i. Out of 30 PC (as defined), 03 PCs (HP) and 02 PCs (Lenovo) of different serial number were found. It might be swapped with machines utilized at other destinations of the University as mentioned by lab In-charge.

- ii. 01 mouse and 01 keyboard were found missing from one PC out of 30 PCs which was then clarified with Mr. Vinod Vishwakarma by Mr. Vikrant as it was issued to him for his lab.

Department of Electrical Engineering

An audit of different laboratories of Department of Electrical Engineering was done by Dr. Shahnawaz Khan and Prof. Shahnawaz Khan on May 20, 2016.

A. Industrial Electronics Lab (EE-603), New Lab Block-112 No.

1. All equipment are in working condition. They arranged all the equipment systematically.
2. All equipment are in use.
3. The sheet also verified with stock register as available in the Lab.
4. Consumable items are verified for their quantity with stock register as available in the Lab

B. Renewable energy system Lab, New Lab Block-113 No.

1. All equipment are in working condition. They arranged all the equipment systematically.
2. All equipment are in use.
3. The sheet also verified with stock register as available in the Lab.
4. Consumable items are verified for their quantity with stock register as available in the Lab

C. Network Analysis and Synthesis Lab (EE-301), New Lab Block-112 No.

1. All equipment are in working condition. They arranged all the equipment systematically.
2. All equipment are in use.
3. The sheet also verified with stock register as available in the Lab.

D. Power System Switch gear & Protection Lab (EE-502), New Lab Block-113 No.

1. All equipment are in working condition. They arranged all the equipment systematically.
2. All equipment are in use.
3. The sheet also verified with stock register as available in the Lab.

E. Linear Control System Lab (EE-501), New Lab Block-113 No.

1. All equipment are in working condition except SON-01, which has send for repairing.
2. They arranged all the equipment systematically.
3. All equipment are in use.
4. The sheet also verified with stock register as available in the Lab.

F. Electrical and Electronics Lab , EB-2 Ground Floor (B-010)

1. All equipment are in working condition. They arranged all the equipment systematically.
2. All equipment are in use.
3. The sheet also verified with stock register as available in the Lab.
4. Consumable items are verified for their quantity with stock register as available in the Lab.

G. Electrical and Electronics Lab , EB-2 Ground Floor (B-008)

1. All equipment are in working condition. They arranged all the equipment systematically.
2. All equipment are in use.
3. The sheet also verified with stock register as available in the Lab.
4. Consumable items are verified for their quantity with stock register as available in the Lab

Department of Electronics Engineering

The audit of ECE department has been done by Dr. Vinod Jeenager and Yogesh Rohilla on May 20, 2016. There are total 9 labs in this department.

1. Analog electronics Lab (EB1-001)

There were total 11 equipments in this lab. All equipment's were in good working condition.

2. EMI Lab (EB1-001)

There were total 14 apparatus in this lab. All equipments were in good working condition.

3. LIC Lab (EB1-001)

There were total 7 apparatus in this lab. All equipments were in good working condition.

4. EDC Lab (EB1-001)

There were total 19 apparatus in this lab. Out of 19 equipments, 1 is not in working condition and need repairing. Function generator (06 in numbers) not in working condition and cannot be repaired.

5. VLSI and Embedded system Lab (NLB-102)

There were total 04 apparatus in this lab. All equipments were in good working condition.

6. Analog communication Lab (NLB-108)

There were total 13 apparatus in this lab. All equipments were in good working condition.

7. DE Lab (NLB-108)

There were total 11 apparatus in this lab. All were in use except encoder and decoder. Encoder and decoder not in working condition and need repair.

8. Digital Communication Lab (NLB-108)

There were total 10 apparatus in this lab. Out of 10 equipment, 3 are not in working condition and need repairing.

9. Microwave Lab (NLB-111)

There were total 06 equipment in this lab. All equipments were in good working condition. Observations are: Power supply of Gunn in repair condition

10. Microprocessor Lab (NLB-111)

There were total 22 equipment in this lab. All equipments were in good working condition.

11. Antenna and wave propagation Lab (NLB-111)

There were total 05 apparatus in this lab. All equipments were in good working condition.

Department of Mechanical Engineering

1. RAC (Refrigeration & Airconditiong) LAB:

1. All equipment are in working condition, and all are arranged very systematic in the lab.
2. All equipment is in used.
3. The given sheet for verification cross checked with stock register as available in the lab.

2. STRENGTH OF MATERIAL LAB:

1. All equipment is in working condition, and all are arranged very systematic in the lab.
2. All equipment is in used.
3. The given sheet for verification cross checked with stock register as available in the lab.

3. THEORY OF MACHINE LAB:

1. All equipment is in working condition, and all are arranged very systematic in the lab.
2. All equipment is in used.
3. The given sheet for verification cross checked with stock register as available in the lab.

4. AUTOMOBILE LAB:

1. All equipment is in working condition, and all are arranged very systematic in the lab.
2. All equipment is in used.
3. One Scooter is there, which entry is not in Stock register.
4. The given sheet for verification cross checked with stock register as available in the lab.

5. IC ENGINE LAB AND THERMAL ENGG. LAB:

1. All equipment is in working condition, and all are arranged very systematic in the lab.
2. All equipment is in used.
3. The given sheet for verification cross checked with stock register as available in the lab

4. MACHINE TOOL LAB:

1. All equipment is in working condition, and all are arranged very systematic in the lab.
2. All equipment is in used
3. The given sheet for verification cross checked with stock register as available in the lab

4. CNC (CAD & CAM) LAB:

- (1) All equipment is in working condition, and all are arranged very systematic in the lab.
- (2) All equipment is in used

(3) The given sheet for verification cross checked with stock register as available in the lab

5. HYDRAULIC MACHINE LAB:

- (1) All equipment is in working condition, and all are arranged very systematic in the lab.
- (2) All equipment is in used
- (3) The given sheet for verification cross checked with stock register as available in the lab

6. WORKSHOP:

- (1) All equipment are in working condition, and all are arranged very systematic in the lab.
- (2) Gas Cutting Torch, Gas Welding Torch, Oxygen Regulator are damaged.
- (3) Crucible Lifting Tong, Digital Vernier Caliper handed over to insurance party.
- (4) The given sheet for verification cross checked with stock register as available in the lab

- **Note: In context of Mechanical Department; remaining quantity of consumable items are not mentioned in given audit sheets and Stock registers.**

As Team allocated for accounts verification shared their business in Academic Council scheduled on 21st and later Convocation on 28th May, their report would be submitted in office by June 10, 2016 by the undersigned.

- Dr. Vipin Jain , Member
- Prof. Gireesh Kaushik, Member
- Prof. Yogesh Rohilla, Member
- Prof. Divanshu Jain, Member
- Dr. Vinod Jeenager
- Dr. Shahnawaz Khan
- Prof. Vishal Singhal
- Mr. Anurag Sharma, Member
- Mr. Mukesh Kumawat, Member
- Ms. Swati Mishra, Member
- Mr. Kamal Punjabi, Member



Dr. Sonal Jain, Chairperson, Lab Equipment Audit Committee



