



Avinashilingam Institute for Home Science and Higher Education for Women

(Deemed to be University under Category A by MHRD, Estd. u/s 3 of UGC Act 1956)

Re-accredited with A+ Grade by NAAC. Recognised by UGC Under Section 12 B

Coimbatore - 641 043, Tamil Nadu, India

Report of the activities of

Bharat Ratna Prof.CNR Rao Research Centre

2018-2020

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**Visit of Administrative audit members to Bharat Ratna Prof.CNR Rao
Research Centre**



Administrative audit at FESEM room





Administrative audit in progress



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Coimbatore - 641 043, Tamil Nadu, India

Administrative Audit Report

Administrative Audit Report

Section /Centre : Bharat Ratna Prof. CNR Rao Research Centre
 Inspecting Authorities :
 1) Thiru Raja. Director, S/F
 2) Dr. Thirumani, Professor and Head, FSN
 Date and Time : 8.12.2020 10.00am
 Section/Centre Incharge : Dr.P.Lalitha, Associate Professor of Chemistry
 with Designation)

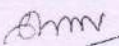
S.No	Assessment Parameters	Comments	Suggestions
	Equipment functioning and usage	All equipments are functioning. Satisfied with the working efficiency of the equipments except one.	Necessary Actions to be taken and make the equipment functioning cord
	Users and outsourcing facilities, Beneficiaries	Excellent.	—
	Budget Sanctioned	no financial issues	—


4	Expenditure	Minimum expenditure and met with in the allotted budget	—
5	Training Programme	Satisfied with the number of training programme organised and abt training programme content.	—
6	Maintenance of the centre	Strongly recommend to have one regular house keeping faculty. (preferably same person)	Preferably same person to clean the centre.
7	Basic Infrastructure	Satisfied with the infrastructure facilities	—

Concluding Remarks (5 to 6 lines) :

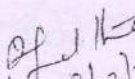
Given in Annexure I

Signatures of the Inspecting Authorities :

(1)  8/12/2020

(2)  8/12/2020

Signature of Section/Centre Incharge :

 8/12/2020

Administrative audit

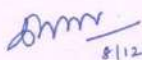
Bharat Ratna Prof.CNR Rao Research Centre

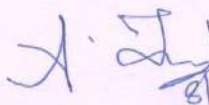
8.12.2020

Annexure - I

Concluding Remarks

1. Dr.S.Raja, Director S/F, Campus II
 2. Dr.A. Thirumani Devi , Professor and Head, Dept. of FSN
- There is difficulty in recording of XRD samples with the help of physics scholars. As the existing technician has less samples for doing analysis, she may be given training to operate the equipment. 30-50 samples can be done in a day. This has to be done immediately considering the requirement
 - IMF people may be asked to help in changing the Nitrogen cylinders ^{and} to avoid the periodical outsourcing charges.
 - 1 or 2 scholars may be given the opportunity to record samples as Earn while you learn scheme (particularly for AAS, Texture analyzer, and honorarium to the consultancy service for Body composition analyzer, and during thesis submission time when more samples are received.) This will reduce the work burden at the time of thesis submission.
 - From the feedback from the staff at the centre, we understand that they are having difficulty in getting housekeeping done regularly
 - One person, preferably same person may be allotted for cleaning the glass doors and equipment rooms in view of nature and importance of the equipment.
 - Advanced Microbial Laboratory with the facilities for cancer studies is recommended in the centre so that the research scholars can do their studies in the centre under one roof.


8/12/2020


8/12/2020



Avinashilingam Institute for Home Science and Higher Education for Women

Bharat Ratna Prof. CNR Rao Research Centre

June 2018 to May 2019

About the Research Centre

The Bharat Ratna Prof. C.N.R. Rao Research Centre houses cutting-edge technologies with high end equipment under a roof that facilitate the trans-disciplinary research. This Research Centre with the state -of- the art equipment is available for use by the research scholars in and outside the Institution.

Bharat Ratna Prof. C.N.R. Rao Research Laboratory - has been established with the funding of DST under "Consolidation of University Research for Innovation and Excellence in Women Universities" (CURIE). The laboratory house a wide array of highly sophisticated equipment like Field Emission Scanning Electron Microscope (FESEM), X-ray Diffractometer (XRD), Nano Spray Dryer, Atomic Absorption Spectrophotometer (AAS), 3D Optical Profilometer, Fourier Transform Infrared Spectrophotometer (FT-IR), Body Composition Analyzer, Thermo Gravimetric Analyser (TGA), Texture Analyzer, Plasma Chamber, Spectrophotometer with Color Lab. This laboratory has been set up with a sum of several cores of rupees. They are helping the research scholars and staff members of this institution to carry out advanced research activities in several disciplines spanning Home Science, Physical Sciences and Computational Sciences, Biosciences and Health Sciences, as well as Engineering disciplines. The facilities available in this high-technology laboratory are also extended to the research scholars and staff members of other educational and research institutions, at a nominal cost, as an outsourcing activity.



Bharat Ratna Prof. CNR Rao Research Centre

**Administrative Audit
June 2018 to May 2019**

S.NO	Name of the Centre	Bharat Ratna Prof. CNR Rao Research Centre
1	No.of equipment in the centre	11
2	Equipment details	Annexure I
3	User Details	Annexure II
4	Budget Sanctioned	Rs.4,00,000 (Consumables – Rs.1,00,000/-, Travel and Contingency – Rs.50,000 /-, Service and Maintenance – Rs.2,50,000/-) Annexure III
	Expenditure	In Annexure III- Details in Bill Register
5	Sample Details	
	Number of samples recorded	3650*
6	Number of visitors	1946 [S.NO : 94- 2039 in visitors note]
7	Consultancy	
	Number of outsourcers	937
	Amount generated	Rs.11,06,075/-
8	Training Programme	
	Number of training given	10
	Beneficiaries	156
	Amount generated	Rs.475000/-
	Frequency	On demand (Monthly)
9	Basic Infrastructure	
	No.of rooms	10
	NO.of AC's	11
	No.of Audio Visual aids	1 PC 1 printer
	Other infrastructural facilities	1 UPS room outside the lab, 1 Water Doctor 1 Vacuum Cleaner, Shoe Cabinet, Locker Cabinet
10	TOTAL CONSULTANCY /OUTSOURCING CHARGES generated	Rs. 15,81,075

****Online entry of samples is done. Will be shown during offline visit***

Annexure I- Equipment details

S.No	Instrument Name	Make/ Model	Purchase date	Amount (Rs)	Department	Fund	Staff and scholars Handling	AMC details
1	Field Emission Scanning Electron Microscope	TESCAN – MIRA3 XMU	26.05.2017	1,48,37,696	CNR Rao Research Center	DST CURIE II	Dr.P.Lalitha CS.Smina S.Santhiya S.Usha	3 yrs free AMC 5 year for lamp (2017 to 2022)
2	XRD	X-Pert Pro PANalytical	17.07.2011	54,22,064	Physics	XI Plan	Dr.P.Usharajala kshmi J.Vinodhini Ms.O.Seifunnisha	-
3	Body Composition Analyser	(Inbody – 720 W/S)Bc – 418, Biospace	05.04.2010	14,98,990	FSN	DST CURIE I	Dr.K.Sujatha	-
4	Texture analyzer	SHIMADZU EZ – XS	17.03.2018	11,02,500	FSMD	DST CURIE II	HOD , FSMD Dr.Karthika	-
5	Spectrophotometer with accessories	SS5100H	26.06.2017	6,75,024	Textile & Clothing	DST CURIE II	Dr.K.Kalaarasi	-
6	Atomic absorption spectrometer	AAS4141/Electronics Corporation of India Limited	31.03.2010	10,47,523	FSN	Special fee Account (Equipment)	Dr.K.Devi	-
7	Plasma Chamber	Ss304/ Vacutech systems	18.02.2010	1,50,000	Textile & Clothing	Non Plan	Dr.S.Amsamani S.Usha	-
8	Nano Spray Dryer	B 90/Buchi India Pvt Ltd	14.12.2011	48,57,254	Textile & Clothing	DST CURIE II	Dr.S.Amsamani S.Usha	-
9	Thermo Gravimetric Analyser (TGA)	EXSTAR/6300	22.02.2011	11,16,500	Chemistry	XI Plan	Dr.P.Lalitha S.Usha	1 st May 2019 to 30 th April 2020
10	FT-IR Spectrophotometer	SHIMADZU	31.05.2017	11,12,906	Chemistry	Non Plan	Dr.P.Lalitha S.Usha CS.Smina S.Santhiya	-
11	3D Optical Profile Meter	Zeta-20	18.02.2015	30,24,352	Chemistry	XII Plan	Dr.P.Lalitha S.Usha	-

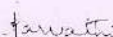
Annexure II- User statistics from online data entry

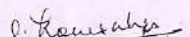
User	Number of users
OUR INSTITUTION RESEARCH SCHOLAR	376
RESEARCH SCHOLAR FROM OUTSIDE INSTITUTION	405
FACULTY FROM OUR INSTITUTION	31
FACULTY FROM OTHER INSTITUTIONS	120
INDUSTRY	1
GUEST	4
TOTAL	937

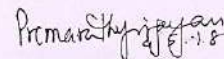
Complete list available as excel sheet online

Annexure III

DST CURIE II PHASE PROJECT Sanction Letter No. Nil Dated 30.03.17															
Plan of Expenses for the Second Year (2018-19)															
Budget Head and Amount Sanctioned	Initial Amount (Lakhs) Proposed to be Allocated to Departments														Total (Lakhs)
	FSN	FSMD	Textiles	FRM	Biochem Biotech, Bioinform.	Chemistry	Zoology	Botany	Physics	C.Sc.	Maths	ARL Lab	CIL	Computer Center	
Consumables 10 lakhs	0.6	0.6	0.6	0.6	0.90	0.90	0.70	0.70	0.70	0.70	0.25	1.0	1.0	0.5	9.75
Travel and Contingency 3.0 Lakhs	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.50	0.50	0.20	2.30
Scientific Conferences/ Workshops/ Seminars 2.0 Lakhs	Workshop/Seminar/Symposia : <ul style="list-style-type: none"> Research Convention(Rs.70000) Food Service Management and Dietetics (Rs.30000) Chemistry-Phytochemical Techniques and Demonstration workshop on FESEM (Rs.40000) Food Science and Nutrition(Rs.30000) Textiles and Clothing(Rs.30000) Physics (Rs.30000) Biochemistry, Biotechnology and Bioinformatics(Rs.40000) 														
Maintenance of Equipment 5.0 Lakhs	<ul style="list-style-type: none"> For Cyclograph - Mobile Fume Hood Rs 70000/- since the table top equipment involves use of solvent For Equipments in ARL: Freeze Dryer AMC, Auto Analyser Service Charges, 2D Gel Electrophoresis Equipment Service Charges: 1.5 Lakhs For Equipments in CIL (new equipment lab) : Service and Maintenance : 2.5 Lakhs 														
Total Rs 4.7 Lakhs															
ARL: Advanced Research Lab; CIL: Central Instrument Laboratory															


 Dean 4/5/18


 Registrar 4/5/18


 Vice Chancellor

EXPENDITURE DETAILS 2018 – 2019					
Travel & Contingency		Consumables		Service and Maintenance	
50000		100000		250000	
Expenditure	Amount (Rs)	Expenditure	Amount (Rs)	Expenditure	Amount (Rs)
Office systems	3932	Jayam Scientific Company	299	AAS	15000
Lifting charges to fesem	7200	Pentagan Infotex	4425	SS Power Control (Nano Spray dryer)	3757
spike buster (13ishnu electro)	295	Nitrogen Cylinder For CIL	20709	Advanced Scintific Equipments	58922
Contingency items	2919	Internet Connections	9853	Shri Baalaji Gas service	21323
Contingency items	710	V net tech solution	4189	Shri Baalaji Gas service	13570
N2 refilling	2714	Cisco-24 Port POE	25724	Magnetic Stirrer FSN	12956
Ad for post of labtechnician (Sudhan Publicity)	4630	Nitrogen refill	2537	Hot Plate (FSN)	28320
MS Stand (Skyline)	1003	Nitrogen refill	2891	HC Lamp for Fe and Cu (FSN)	50740
Photo frame (Kannan Clr stu)	1440	Shri 13ishnu scienfic Company	7342	C2H2 gas regulated for AAS (FSN)	11210
Travel (CBE to BLR and BLR to CBE)	12163	Ponmani & Co	10272	Nebulizer for AAS (FSN)	37760
N2 Refilling	2891	Glassware (Science World)	3528	N2 Refilling	2891
Ramesh mess & sri vinayaga Pazhamudhir	5000	Precision (chemical)	7007		
skyline	1204				
Stationery items	3325				
SARADALAYA PRESS	725				
Stationery items	870				
N2 Refilling	2891				
Total	53912		98776		256449



Avinashilingam Institute for Home Science and Higher Education for Women
Bharat Ratna Prof. CNR Rao Research Centre

Administrative Audit

June 2019 to May 2020

Bharat Ratna Prof. CNR Rao Research Centre

**Administrative Audit
June 2019 to May 2020**

S.NO	Name of the Centre	Bharat Ratna Prof. CNR Rao Research Centre
1	No.of equipment in the centre	15
2	Equipment details	Annexure IV
3	USER DETAILS	Annexure V
4	Budget Allotted	Non-Plan- Rs.7,00,000/- (Equipment), DST CURIE PHASE II – Rs.3,60,000/- (Consumables – Rs.1,00,000/-, Travel and Contingency – Rs.50,000/- and Maintenance – Rs.2,10,000/-) Annexure III
	Expenditure	In Annexure VI- Details in Bill Register
5	Sample Details	
	Number of samples recorded	4533*
6	Number of visitors	2130 [S.NO : 2040 – 4169]
7	Consultancy	
	Number of outsourcers	1338
	Amount generated	Rs.1106075/-
8	Training Programme	
	Number of training given	4 (2 PCC, 1 FESEM WORKSHOP and 1 AAS WORKSHOP)
	Beneficiaries	85
	Amount generated	Rs.128000/-
	Frequency	Per semester
9	Basic Infrastructure	
	No.of rooms	10
	NO.of AC's	11
	No.of Audio Visual aids	1 PC 1 printer
	Other infrastructural facilities	1 UPS room outside the lab, 1 water doctor 1 Vacuum Cleaner, Shoe cabinet, Locker Cabinet
10	TOTAL CONSULTANCY /OUTSOURCING CHARGES generated	Rs.1234075/-

****Online entry of samples is done. Will be shown during offline visit***

Annexure IV

Equipment details - June 2019 to May 2020

S.No	Instrument Name	Make/ Model	Purchase date	Amount (Rs)	Department	Fund	Staff and scholars Handling	AMC details
1	Field Emission Scanning Electron Microscope	TESCAN - MIRA3 XMU	26.05.2017	1,48,37,696	CNR Rao Research Center	DST CURIE II	Dr.P.Lalitha Ms.C.Akhila Ms.S.Gayathri	3 yrs free AMC
2	XRD	X-Pert Pro PANalytical	17.07.2011	54,22,064	Physics	XI Plan	Dr.P.Usharajalakshmi P.Priyanka J.Vinodhini	-
3	Body Composition Analyser	(Inbody – 720 W/S)Bc – 418, Biospace	05.04.2010	14,98,990	FSN	DST CURIE I	Dr.K.Sujatha Ms.S.Gayathri	-
4	Texture analyzer	SHIMADZU EZ - XS	17.03.2018	11,02,500	FSMD	DST CURIE II	HOD , FSMD Dr.S.Karthiga	-
5	Spectrophotometer with accessories	SS5100H	26.06.2017	6,75,024	Textile & Clothing	DST CURIE II	Dr.K.Kalaarasi Ms.S.Gayathri	-
6	Atomic absorption spectrometer	AAS4141/Electronics Corporation of India Limited	31.03.2010	10,47,523	FSN	Special fee Account (Equipment)	Dr.K.Devi	-
7	Plasma Chamber	Ss304/ Vacutech systems	18.02.2010	1,50,000	Textile & Clothing	Non- Plan	Dr.S.Amsamani Ms.S.Gayathri	-
8	Nano Spray Dryer	B 90/Buchi India Pvt Ltd	14.12.2011	48,57,254	Textile & Clothing	DST CURIE II	Dr.S.Amsamani Ms.S.Gayathri	-
9	Thermo Gravimetric Analyser (TGA)	EXSTAR/6300	22.02.2011	11,16,500	Chemistry	XI Plan	Dr.P.Lalitha Ms.S.Gayathri	June 2020 to May 2021
10	FT-IR Spectrophotometer	SHIMADZU	31.05.2017	11,12,906	Chemistry	Non- Plan	Dr.P.Lalitha Ms.S.Gayathri Ms.C.Akhila Ms.P.Aruna Ms.R.Rajalakshmi	-
11	3D Optical Profile Meter	Zeta-20	18.02.2015	30,24,352	Chemistry	XII Plan	Dr.P.Lalitha Ms.S.Gayathri	-
12	Turbidity Meter	Systronics Model:132	28.01.2020	22,302	Prof. CNR Rao Research Centre	Non - Plan	Dr.P.Lalitha Ms.S.Gayathri	-
13	Ultrasonic Homogenizer	Model VCX 500 Vibracell Ultrasonic Processor	23.01.2020	4,35,750	Prof. CNR Rao Research Centre	Non - Plan	Dr.P.Lalitha Ms.S.Gayathri Ms.P.Aruna	-
16	Oil Bath	Sigma	30.01.2020	19,470	Prof. CNR Rao Research Centre	Non - Plan	Dr.P.Lalitha	-
17	Vacuum Pump	Millipore	13.02.2020	19,470	Prof. CNR Rao Research Centre	Non - Plan	Dr.P.Lalitha	-
14	Fruit & Vegetable Purifier	FVP 10-FG0206	19.12.2020	5,192	Prof. CNR Rao Research Centre	DST CURIE II	Dr.P.Lalitha Ms.S.Gayathri Ms.C.Akhila	-
15	Analytical Balance	Shimadzu ATY224	15.02.2020	65,625	Prof. CNR Rao Research Centre	DST CURIE II	Dr.P.Lalitha Ms.S.Gayathri Ms.C.Akhila Ms.P.Aruna	-

							Ms.R.Rajalakshmi	
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Annexure V- User statistics from online data entry

User	Number of users
OUR INSTITUTION RESEARCH SCHOLAR	491
RESEARCH SCHOLAR FROM OUTSIDE INSTITUTION	653
FACULTY FROM OUR INSTITUTION	48
FACULTY FROM OTHER INSTITUTIONS	143
INDUSTRY	0
GUEST	3
TOTAL	1338

Complete list available as excel sheet online

Annexure VI Budget sanctioned copy

AVINASHILINGAM INSTITUTE FOR HOME SCIENCE AND HIGHER EDUCATION FOR WOMEN, COIMBATORE
BUDGET ALLOTMENT FOR THE YEAR 2019-2020
Name of the Department : Bharat Ratna CNR Rao Research Centre
BUDGET REQUIREMENT UNDER NON PLAN

Sl. No	Particulars	Amount requested by the Departments 2019-2020	Amount sanctioned by the Vice Chancellor
1)	EQUIPMENTS (As per list enclosed)		
	1.Tubular furnace	1,00,000.00	
	2.Ultrasonic homogenizer	5,00,000.00	
	3.Hot Plate	50,000.00	
	4.Sonic bath	50,000.00	
	Total	7,00,000.00	Under NON PLAN A/c

BUDGET REQUIREMENT UNDER PLAN

Sl. No	Particulars	Amount requested by the Departments 2019-2020	Amount sanctioned by the Vice Chancellor
2)	EQUIPMENTS (As per list enclosed)		
	Advanced Biological Laboratory (ABL)		
	1.Laminar Air Flow	1,60,000.00	
	2.CO2 Incubator	1,00,000.00	
	3.ELSA reader	1,50,000.00	
	4.Autoclave	50,000.00	
	5.PCR	1,00,000.00	
	6.Deep Freezer	1,50,000.00	
	7.Refrigerator	40,000.00	
	8.Fluorescent Microscope	5,00,000.00	
	9.Hot air oven	50,000.00	
	10.Nano drop Spectrophotometer	5,00,000.00	
	11.SDS 2D Gelelectrophoresis	2,00,000.00	
	Total	20,00,000.00	Under PLAN A/c on priority basis

S. Kausalya
REGISTRAR
H

Bharat Ratna CNR Rao Research Centre
Under NON PLAN

S.No	Equipment particulars	Price (Lakhs)	Justification
1	Tubular Furnance	1.0	For charring and burning raw materials before analysis. (To be used by all departments requiring this facility).
2	Ultrasonic homogenizer	5.0	This equipment is required for sample dispersion and selected synthesis of materials. This is required for sample preparation before analysis in Laser profilometer, FESEM etc. (To be used by all departments requiring this facility).
3	Hot plate	0.5	For sample heating and preparation. (To be used by all departments requiring this facility).
4	Sonic bath	0.5	For sample dispersion. (To be used by all departments requiring this facility).
	Total	7.0	

3) BUDGET REQUIREMENT UNDER DST CURIE PHASE II					
Sl. No	Particulars	Budget sanctioned by DST CURIE PHASE II	Amount requested by the Departments 2019-2020		Amount sanctioned by the Vice Chancellor
1	Contingency Requirement	3,00,000.00		50,000.00	Under DST CURIE PHASE II
2	Consumable Requirement	10,00,000.00		1,00,000.00	
	Maintenance				
3	AMC for TGA		30,000.00		
4	Nanospray drier	7,00,000.00	1,50,000.00	2,10,000.00	
5	Maintenance OF FTIR		30,000.00		
	TOTAL	20,00,000.00		3,60,000.00	

S. Choudhary
REGISTRAR
12

Bharat Ratna CNR Rao Research Centre

Under PLAN

S.No	Equipment particulars	Price (Lakhs)	Justification
1	Advanced Biological Laboratory (ABL)		Required for microbial and cell line studies as this facility is currently not available in the school of PS and CS.
2	Laminar Air Flow	1.6	To prevent airborne contaminants from entering an area for culturing cells.
3	Co2 Incubator	1.0	To maintain a constant temperature and high humidity for the growth of tissue culture cells under a CO2 atmosphere.
4	ELISA reader	1.5	To identify peptides, proteins, antibodies and hormone.
5	Autoclave	0.5	Sterilize cells and glassware.
6	PCR	1.0	To multiply chromosomes.
7	Deep freezer	1.5	Preservation purpose.
8	Refrigerator	0.4	To maintain media and chemical.
9	Fluorescent microscope	5.0	Used to observe image of specific features of small specimens such as microbes.
10	Hot air oven	0.5	Sterilization.
11	Nano drop Spectrophotometer	5.0	To quantify and assess purity of DNA, RNA, protein and more.
12	SDS 2D Gel electrophoresis	2.0	To separate protein from treated cells.
Total		20.00	

EXPENDITURE DETAILS 2019 – 2020 (Under DST CURIE PHASE II)					
Contingency		Consumables		Maintenance	
50000		100000		400000	
Expenditure	Amount (Rs)	Expenditure	Amount (Rs)	Expenditure	Amount (Rs)
PRINTER drum change	826	N2 GAS REFILLING	4838	INKARP TGA	35400
Batteries Refilling	980	FIRE EXTINGUISHER	3363	INKARP TGA Crucible	75520
Laser toner Refilling	413	N2 GAS REFILLING	2950	Faraday Ozone	5192
DVD and Pouch, CNR Photo	740	Precision	48214	Colorlab Cuvette and Service	14750+34810 (49560)
CNR Photo Print	5280	Ponmani	30643	Analytical Balance	65625
CNR Rao Photo Framing	11500	Ponmani	9991.25	AAS	177590
Bill Book	730	Technico	2787		
Name Board (1770 +4260)	6030				
PRINTER REFILL	413				
N2 GAS REFILLING	7316				
nitrogen valve	5381				
nitrogen valve	5381				
Global Stationary	1423				
Rangaswamy Chettiar	2538				
Global Stationary	1940				
Total	50891		102786.25		408887

EXPENDITURE DETAILS 2019 – 2020 (Under NON-PLAN)		
Equipment	Amount (Rs)	Expenditure
TUBULAR FURNACE	1,00,000	
UITRASONIC HOMOGENIZER	5,00,000	435750
UITRASONIC HOMOGENIZER (Technical Expert)		1000
HOT PLATE	50,000	
SONIC BATH	50,000	23600
TURBIDITY METER		22302
Vaccum Pump		19470
Oil bath		19470
TOTAL	7,00,000	521592

Sample copy of online entry of online requisition 2018-2019

AA JUNE 2018 to MAY 2019.xlsx - Microsoft Excel

OUR INSTITUTION RESEARCH SCHOLAR											
	A	B	D	E	F	G	H	N	O	P	R
	Timestamp	NAME OF THE	MONTH	USER DETAIL	PAYMENT	Name of the outsource	Designation /Class	INSTITUTION	number	Sample Code(amount paid
1	31 May 2019	FT IR	May	RESEARCH S	132	Dr.G.Sharmila	Ph.D Scholar, Dep	PSGR Krishnamma	7	TGGDB-P, TC	700
2	31 May 2019	THERMOGRA	May	RESEARCH S	131	Dr. R.Ranjith Kur	Mechanical Engine	SKCET	3	I5C, A2 B2, I8	1500
3	31 May 2019	XRD	May	OUR INSTITU	130	V.Gayathiri	Ph.D Scholar	Avinashilingam	8	XEC1, XEC2, J	800
4	30 May 2019	FESEM	May	RESEARCH S	123	Dr.P.Karthika	Research Scholar	Govt. College of T	4	PJ4C, PJ6C, P	4000
5	30 May 2019	EDS	May	RESEARCH S	124	Lalitha P	Research Scholar	Govt. College of T	1	BSMS	500
6	29 May 2019	XRD	May	RESEARCH S	129	Megha M	Ph.D Scholar	GCT College of Te	1	MD	250
7	29 May 2019	FT IR	May	OUR INSTITU	128	Aiswarya Gowri V	M.Phil, Physics	Avinashilingam	3	F1, F2, F3	150
8	29 May 2019	FT IR	May	RESEARCH S	127	Dr.B.Sajitha, Dr.R.R	Civil Engineering	PSG Technology	12	IRNA3150, IR	1200
9	29 May 2019	XRD	May	RESEARCH S	127	T.Yokesh, J.Vishnu	Ph.D Scholar	PSG Technology	7	IRNA3150, IR	1750
10	29 May 2019	FESEM	May	OUR INSTITU	126	Dr.R.Karthiyayini, I	Ph.D Scholar	Avinashilingam	2	FGR, FGL	1000
11	28 May 2019	FESEM	May	RESEARCH S	REM-486/20	N.Ialakhyia, K.Geetha	M.Phil Physics	St.Joseph's College	2	Ag-Fe, Cu-Fe	2000
12	28 May 2019	FESEM	May	RESEARCH S	REM-494/20	V.Gayathri	Ph.D Scholar	PSG Institute of T	3	Cal 1, Cal 3, Ca	3000
13	28 May 2019	FESEM	May	RESEARCH S	122	G.Prashanth	Ph.D Research Sch	Adhiyaman colle	4	LA, L3, L5, L6	4000
14	28 May 2019	FT IR	May	RESEARCH S	125	A.S.Sasireka3	Ph.D Research Sch	SRMV CAS	6	PPY 1, PPY2, F	600
15	27 May 2019	XRD	May	RESEARCH S	121	Mrs.S.Bhuvaneswar	Msc	TNAU,Coimbatore	2	Sio2	500
16	27 May 2019	THERMOGRA	May	RESEARCH S	120	S.Subramani	Msc	TNAU,Coimbatore	2	S-WL and S-L	1000
17	27 May 2019	XRD	May	RESEARCH S	119	P.Senthilkumar	Research Scholar	PSG College of Te	2	Metal and Oxid	500
18	24 May 2019	FT IR	May	RESEARCH S	118	V.Kavitha	Ph.D Scholar	PSGRKC	5	OT-EBA-OXII	500
19	23 May 2019	XRD	May	RESEARCH S	117	R.Vini	Ph.D Research Sch	PSG College of Te	8	Nickel Alloy W	2000
20	22 May 2019	THERMOGRA	May	OUR INSTITU	115	R.M.Vimalathithan	Research Scholar	Avinashilingam	3	C1, C2, PI	300
21	22 May 2019	FT IR	May	OUR INSTITU	115	SR.Akshaya	Research Scholar	Avinashilingam	4	C1, C2, CP, PI	200
22	22 May 2019	FT IR	May	RESEARCH S	116	R.Anne Sarah Christ	Ph.D Scholar	CBNR Bharathiar	14	RC,R5,R6,R7,F	1400
23	22 May 2019	FESEM	March	RESEARCH S	REM3173,R	Maria Babu	Research Scholar	madras christian co	7	cczp@4, cczco	7000
24	22 May 2019	FESEM	March	RESEARCH S	REM2790/2	K.Sujitha	Research Scholar	psg college of techn	10	3, Nil, min.wt,	5000
25	21 May 2019	XRD	May	RESEARCH S	114	S.Gowri	Research Scholar	Sri Sakthi Institute	5	Tio2 Thin films	1250
26	21 May 2019	FT IR	May	RESEARCH S	113	A.Reshma	Research Scholar	PSGR Krishnamma	8	ACDP, ADSI,	800
27	21 May 2019	FT IR	May	OUR INSTITUTION RESE		V.Sharmila	Ph.D Scholar	Avinashilingam	3	PMA,PPA,WPMA	
28	16 May 2019	THERMOGRA	May	RESEARCH S	112	A.Revathi	Student	TNAU Coimbatore	2	BC, Chitosan	1000

Sample copy of online entry of online requisition 2019-2020

AA - JUNE 2019 to MAY 2020.xlsx

N256 SRMV CAS										
	A	B	C	D	E	F	G	N	O	S
	Timestamp	NAME OF THE EQUIPMENT	DEPARTMENT	MONTH	USER DETAILS	PAYMENT DETAIL S- receipt number	Name of the outsourcer	INSTITUTION	number of samples	sample received date
251	22-Feb-2020	FESEM	CHEM	Febru	RESEARCH	600	R Krithika	Govt.Arts College	2	19-02-2020
252	22-Feb-2020	FT IR	CHEM	Febru	RESEARCH	599	Princy	Govt.Arts College	6	19-02-2020
253	22-Feb-2020	XRD	PHYSI	Febru	RESEARCH	599	Nishanth R	Govt.Arts College	6	19-02-2020
254	22-Feb-2020	FESEM	CHEM	Febru	RESEARCH	599	Ruth	GOVT.ARTS COL	6	22-02-2020
255	22-Feb-2020	XRD	PHYSI	Febru	OUR INSTI	598	BONY P JOY	Avinashilingam	6	19-02-2020
256	22-Feb-2020	THERMOGRA	CHEM	Febru	RESEARCH	602	Lejitha	SRMV CAS	1	19-02-2020
257	22-Feb-2020	FESEM	CHEM	Febru	RESEARCH	602	Swathi R	SRMV CAS	1	22-02-2020
258	22-Feb-2020	PLASMA CHA	TEXTI	Febru	OUR INSTI	601	Minakshi Hazarik	Avinashilingam	3	19-02-2020
259	22-Feb-2020	XRD	PHYSI	Febru	RESEARCH	REM3843	P Adlin Helen	Sri Saradha Colle	1	19-02-2020
260	18-Feb-2020	THERMOGRA	CHEM	Febru	RESEARCH	REM3779	Yuvapriya S	K S R College of	4	18-02-2020
261	18-Feb-2020	UV SPECTROPI	TEXTI	Febru	FACULTY	1597	Yuvapriya S	Avinashilingam	30	18-02-2020
262	18-Feb-2020	FT IR	CHEM	Febru	FACULTY	1597	Sreedhanya	Avinashilingam	4	18-02-2020
263	18-Feb-2020	FESEM	CHEM	Febru	RESEARCH	171	Adithya Krishna	Adhiyamaan Coll	3	18-02-2020
264	18-Feb-2020	THERMOGRA	CHEM	Febru	RESEARCH	596	EPHSY K DAVIS	Sri Ramakrishna C	2	18-02-2020
265	18-Feb-2020	FESEM	CHEM	Febru	RESEARCH	595	K Jai Kumar	Sri Ramakrishna I	1	18-02-2020
266	18-Feb-2020	XRD	PHYSI	Febru	RESEARCH	594	D SEKHAR	GCT College	2	18-02-2020
267	18-Feb-2020	FESEM	CHEM	Febru	RESEARCH	594	Priyanka P	GCT	6	18-02-2020
268	17-Feb-2020	THERMOGRA	CHEM	Febru	RESEARCH	593	P PRIYANKA	PSG College of T	15	17-02-2020
269	17-Feb-2020	LASER PROFIL	CHEM	Febru	OUR INSTI	592	P.Kanchana	Avinashilingam	4	17-02-2020
270	17-Feb-2020	LASER PROFIL	CHEM	Febru	OUR INSTI	591	I SUGANYA	Avinashilingam	2	17-02-2020

Sample requisition for outsourcing the facilities at Bharat Ratna Prof.CNR Rao RC

Contact details: adusamples@avinuty.ac.in

Avinashilingam Institute for Home Science and Higher Education for Women,
Coimbatore-43

BHARAT RATNA Prof.CNR RAO RESEARCH CENTRE

REQUISITION FOR SAMPLE ANALYSIS

Name	:		
Designation/Class	:		
Institution and Address	:		
Department	:		
Email id	:		Mobile:
User category	:	Industry/Lab/UG/PG/ M.Phil. /Project work/Ph.D//Faculty	
<u>SAMPLE INFORMATION</u>			
Number of samples	:	<input style="width: 50px;" type="text"/>	Sample Code <input style="width: 150px;" type="text"/>
Nature of Sample	:	Solid/Liquid/Metal plate/Glass plate/Polymer film/Textile/others	
Receipt no	:	<input style="width: 100px;" type="text"/>	Date: <input style="width: 80px;" type="text"/>

List of equipment available for sample analysis

S.NO	PARTICULARS	No.of samples	SAMPLE INFORMATION
1	FESEM & elemental analysis (with mapping of elements)		Expected elements:
2	3D Optical Profiler		
3	Thermo Gravimetric Analyser (TGA)		
4	FT-IR		
5	XRD		Angle range : Step size:Time per step :
6	Texture Analyzer		
7	Spectrophotometer with colorlab		
8	Nano Spray dryer (200ml)		
9	Plasma Chamber		
10	Atomic Absorption Spectrometer		
11	Body Composition Analyzer		
12	Ultrasonic homogenizer		
13	Turbidity meter		

***Kindly acknowledge the facility utilized in publications and intimate to us

Signature of Student

Signature of Guide/HOD

Online Payment details: The Registrar, SB A/C: 6059667020 (R&C)
INDIAN BANK, ADUC BRANCH, IFSC:IDIB000A005

ANALYSIS OUTSOURCING CHARGES*





S.NO	PARTICULARS	CHARGES PER SAMPLE		
		Inside Institution	Other Institution	Industries/ R&D's
1	FESEM	500	1000	3000
2	3D Optical Profiler	50	500	4000
3	Thermo Gravimetric Analyser*	100	500	2000
4	FT-IR	50	100	250
5	XRD	100	250	1000
6	Texture Analyzer	50	100	1000
7	Spectrophotometer with colorlab	50	100	200
8	Nano Spray dryer*	300	750	3000
9	Plasma Chamber	100	300	1000
10	Atomic Absorption Spectrometer	100	200	400
11	Body Composition Analyzer	100	150	500
12	Ultrasonic homogenizer	25	25	100
13	Turbidity meter	25	25	100

*Depending on operation time of equipment

**Avinashilingam Institute for Home Science and Higher Education for
Women, Coimbatore-641 043.**

Bharat Ratna Prof. CNR Rao Research Centre

Summary of Programmes organized

-  **11 one-day training FESEM workshops**
-  **Two Professional certificate Courses on “Analytical and
Phytochemical techniques”**
-  **One certificate course on “Analytical and Phytochemical
techniques”**
-  **One Summer training (online internship programme) on **Analytical
Techniques in Research****
-  **One National Conference on Global trends in Science and
Engineering**
-  **One plenary lecture on “Climbing the limitless ladders of
excellence in Science” by Prof.CNR Rao (through Skype)**
-  **Hand Sanitizer preparation**

PCC AND CC PAYMENT DETAILS TO BE ENTERED IN ORIGINAL FILE

S.NO	DD/MM/YY	Course Name	No.of Participants	Amount (Rs.)	Receipt Details
1	Aug 17 – Oct 31,2019	PCC I	30	60000	SEM241/2019-20, SEM269-273/19-20
2	Nov 27 to 30, 2019	CC I	24	48000	SEM380/19-20, REM1965/19-20, SEM382-393/19-20
3	June 6 to13,2020	Summer Internship	141	42300	Several Receipts received from FO
4	Sep - Oct,2020	PCC III	68	136000	SEM109-SEM112/20-21

Report of Certificate Course on Analytical and Phytochemical Techniques in Research



Avinashilingam Institute for Home Science and Higher Education for Women
(Deemed to be University under Category 'A' by MHRD, Estd. u/s 3 of UGC Act 1956)
Re-accredited with 'A+' Grade by NAAC. Recognised by UGC under Section 12 B
Coimbatore-641 043, Tamil Nadu, India

BHARAT RATNA CNR RAO RESEARCH CENTRE
Online Certificate Course - “Analytical and Phytochemical Techniques”

Duration – September to October, 2020

Google Meet Link: meet.google.com/xje-recc-fmm

No.of Registered Participants: 68

Course Fee – Rs.2000/-

Total Fee Generated – 68*Rs.2000 : Rs.1,36,000 (No.SEM 109-SEM112)

Expenditure : Rs.14880

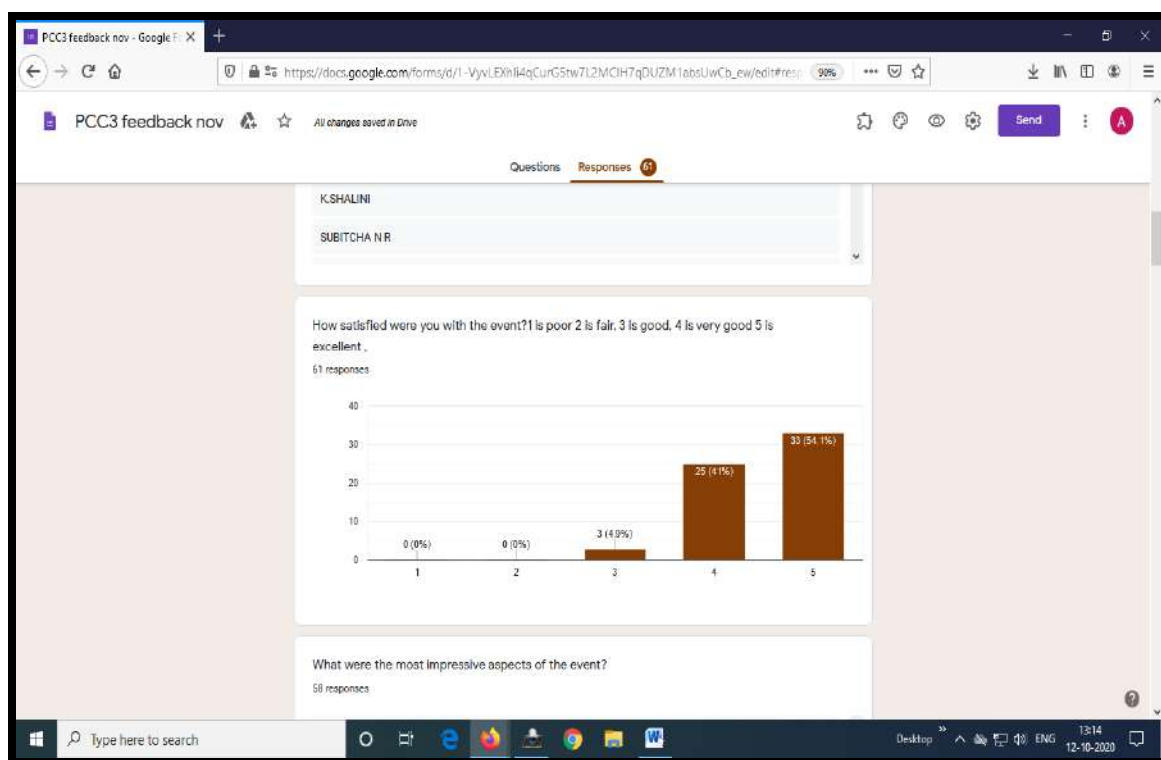
Item	Amount (Rs)	Bill
Certificate 200 Nos	2880	Credit
Trainer Fee	12000	Online Transfer Requested
Total	14880	

S.NO	Date	Day	Title in Syllabus	Resource Person	Time
			Introduction, Prayer Song		3.45pm
	02.09.2020	WED	Inauguration Greetings: Orientation	Dr.K.Udaya Chandrika Dean, PS&CS Dr. P Lalitha, Associate Professor of Chemistry.	3.50pm to 4.00pm 4.00pm to 4.45pm
	03.09.2020	THUR	Turbidity Meter - Theory –Principle, Instrumentation, Applications, Operating Procedure	Dr. P Lalitha, Associate Professor of Chemistry.	3.45pm to 4.45pm
	04.09.2020	FRI	Turbidity Meter - Practical Session	S Gayathri, Lab Technician , CNR Rao Lab	3.45pm to 4.45pm
	04.09.2020	FRI	Evaluation	Online MCQ	5.00pm to 6.00pm
	05.09.2020	SAT	3D Laser Profilometer-Operating Procedure and application of 3D Laser Profilometer,	Ms.C Akhila Department of Chemistry	10.30am to 11.30am
	05.09.2020	SAT	3D Laser Profilometer-Evaluation	Online MCQ	11.30- 12.30pm
	07.09.2020	MON	3D Laser Profilometer Practical Demonstration	S Gayathri, Lab Technician , CNR Rao Lab	2.30pm to 3.30pm
	9.9.2020	WED	Phytochemical and Techniques	Dr.(Mrs.)Shubhashini.K.Sripathi Professor of Chemistry.	3.45pm to 4.45pm
	10.9.2020	TUE	General Analytical Techniques	Dr.P.Lalitha, Associate Professor of Chemistry	3.45pm to 4.45pm
	10.9.2020	THUR	Evaluation on General Analytical Techniques	Online MCQ	5.00pm to 6.00pm
	11.9.2020	FRI	Nano spray drier - Theory – Principle, Instrumentation, Applications, Operating Procedure	Dr.S.Amsamani, Professor of T & C	3.45pm to 4.45pm
	12.9.2020	SAT	Practical Session: Nano spray drier	S Gayathri, Lab Technician , CNR Rao Lab	3.45pm to 4.45pm
	12.9.2020	SAT	Evaluation on Nano spray drier	Dr.S.Amsamani, Professor of T & C	5.00pm to 6.00pm

	14.9.2020	MON	Use of Colour lab in Research • Operating Procedure- interpretation of results.	Dr.(Mrs.) K.Kalaiarasi, Assistant Professor of T & C.	2.30pm to 3.30pm
	14.9.2020	MON	Practical Session: Colorlab with Spectrophotometer	S Gayathri, Lab Technician , CNR Rao Lab	3.45pm to 4.45pm
	14.9.2020	MON	Evaluation	Online MCQ	4.00pm to 5.00pm
	15.9.2020	TUE	Antimicrobial Activity Diffusion method	S Gayathri, Lab Technician , CNR Rao Lab	4.00pm to 4.45 pm
	15.9.2020	TUE	Practical Session: Antimicrobial Activity Diffusion method	S Gayathri, Lab Technician , CNR Rao Lab	4.45pm to 5.00pm
	15.9.2020	TUE	Evaluation : Antimicrobial Activity Diffusion method	Online MCQ	5.30pm to 6.30pm
	16.9.2020	WED	Spectral Techniques FTIR spectrometer - Principles of Operation, Sample Operating Procedures	Dr. P Lalitha, Associate Professor of Chemistry.	3.45pm to 4.45pm
	16.9.2020	WED	Practical Session: FTIR spectrometer	S Gayathri, Lab Technician , CNR Rao Lab	4.45pm to 5.30pm
	16.9.2020	WED	Evaluation : FTIR	Online MCQ	8.00pm to 10.00pm
	18.9.2020	FRI	Software tools used in research - Scifinder	Dr. P Lalitha, Associate Professor of Chemistry.	3.45pm to 4.45pm
	18.9.2020	FRI	Evaluation : Virtual Tools	Online MCQ	5.00pm to 6.00pm
	18.9.2020	FRI	Evaluation : Insilico Tools	Online MCQ	7.00pm to 8.00pm
	19.9.2020	SAT	X-Ray Diffraction	Dr.Usha Rajalakshmi Dept of Physics.	10.00am to 11.00am
	19.9.2020	SAT	X-Ray Diffraction	Dr.Usha Rajalakshmi, Dept of Physics.	11.30pm to 12.30pm
	19.9.2020	SAT	X-Ray Diffraction Evaluation	Online MCQ	4.00pm to 5.00pm
	19.9.2020	SAT	Evaluation - statistics	Online MCQ	6.00pm to 7.00pm
	21.9.2020	MON	Evaluation – Research Methodology	Online MCQ	3.30pm to 4.00pm
	22.9.2020	TUE	Thermo Analytical Techniques	P Aruna , Dept of Chemistry	3.45pm to 4.45pm
	22.9.2020	TUE	Practical Session: Ultrasonic Homogenizer	S Gayathri, Lab Technician , CNR Rao Lab	4.45pm to 5.45pm
	23.9.2020	WED	Differential Interpretation of data scanning calorimeter-thermo mechanical analysis.	P Aruna Dept of Chemistry	3.45pm to 4.45pm
	24.9.2020	THUR	Atomic Absorption Spectrometer	Ms.K.Devi, Assist Professor of FSN.	3.45pm to 4.45pm
	25.9.2020	FRI	Practical Session of Atomic Absorption Spectrometer	S Gayathri, Lab Technician , CNR Rao Lab	3.45pm to 4.45pm
	25.9.2020	FRI	Evaluation : Atomic Absorption Spectrometer	Online MCQ	5.00pm to 6.00pm
	26.9.2020	SAT	Practical Session: Thermo Gravimetric Analyser.	S Gayathri, Lab Technician, CNR Rao Lab.	10.30 am to 11.30 am
	26.9.2020	SAT	Evaluation - Thermo Gravimetric Analyser.	Online MCQ	11.30am to 12.30pm
	26.9.2020	SAT	Phytochemical Techniques	Dr.(Mrs.)Shubhashini.K.Sripathi Professor of Chemistry.	2.30pm to 3.30pm
	26.9.2020	SAT	Evaluation on Phytochemical	Online MCQ	3.45pm to

			Techniques		4.45pm
	28.9.2020	MON	Scanning Electron Microscopy	Dr. P Lalitha, Associate Professor of Chemistry.	2.30pm to 3.30pm
42.	28.9.2020	MON	Sputtering	Dr. P Lalitha, Associate Professor	3.30pm to 4.30pm
43.	30.9.2020	WED	Electron diffraction spectroscopy, elemental mapping-EDS' interpretation of the techniques	Dr. P Lalitha, Associate Professor	3.45pm to 4.45pm
	30.9.2020	WED	Practical Session : Scanning Electron Microscopy and EDS	Dr. P Lalitha, Associate Professor	4.45pm to 5.45pm
	30.9.2020	TUE	Evaluation : FESEM	Online MCQ	5.00pm to 6.00pm
	1.10.2020	WED	Examination	Online MCQ	3.45pm to 4.45pm
	1.10.2020	THUR	Conclusion		3.45pm to 4.45pm
	1.10.2020	THUR	Feedback		5.00pm to 6.00pm

FEEDBACK

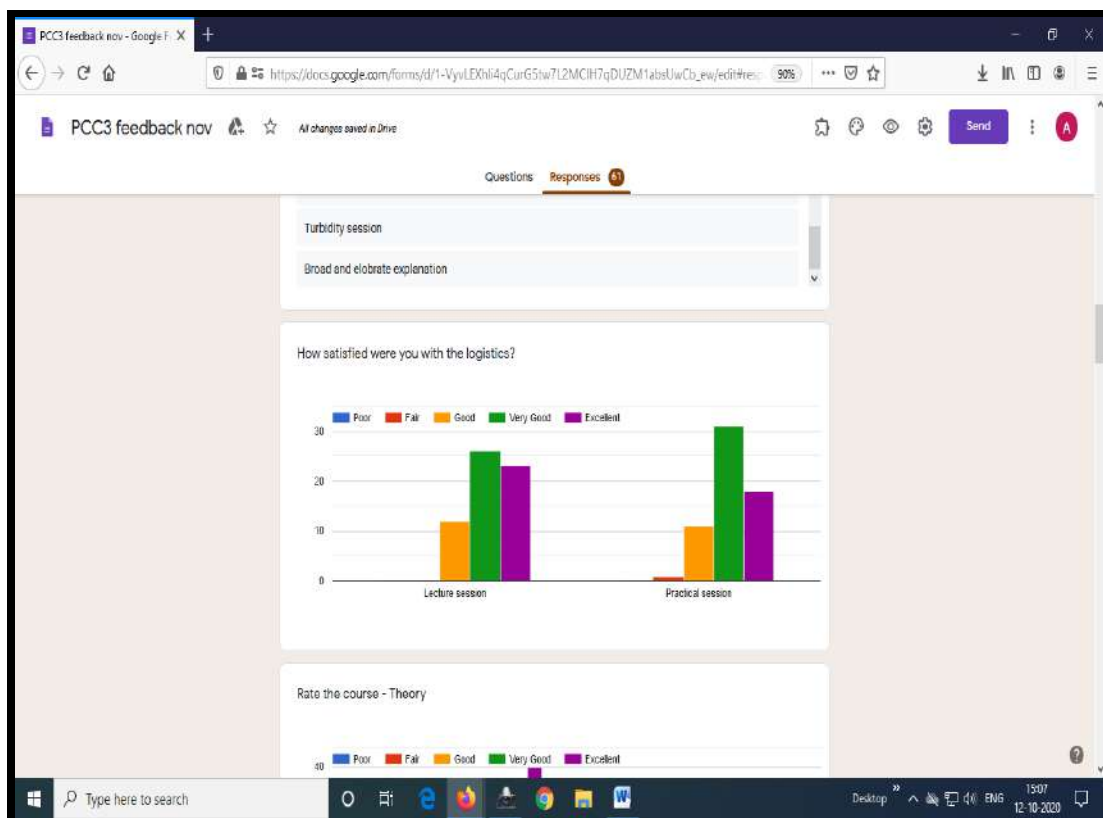


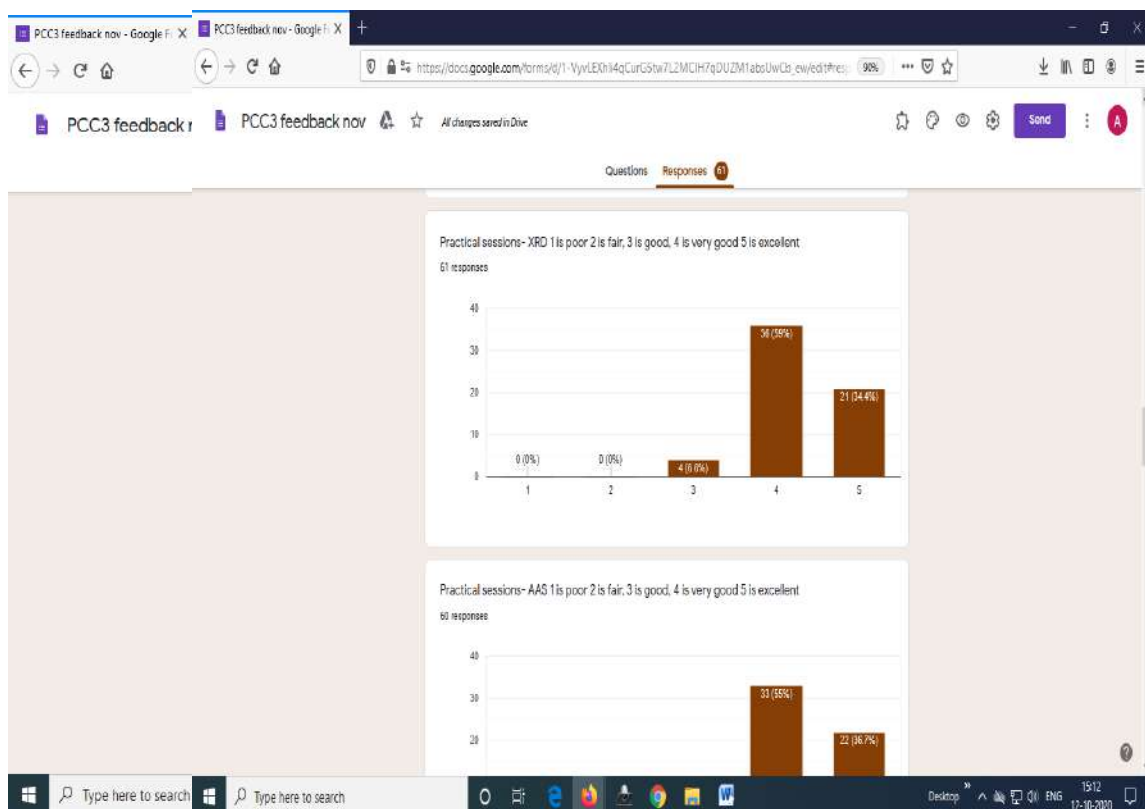
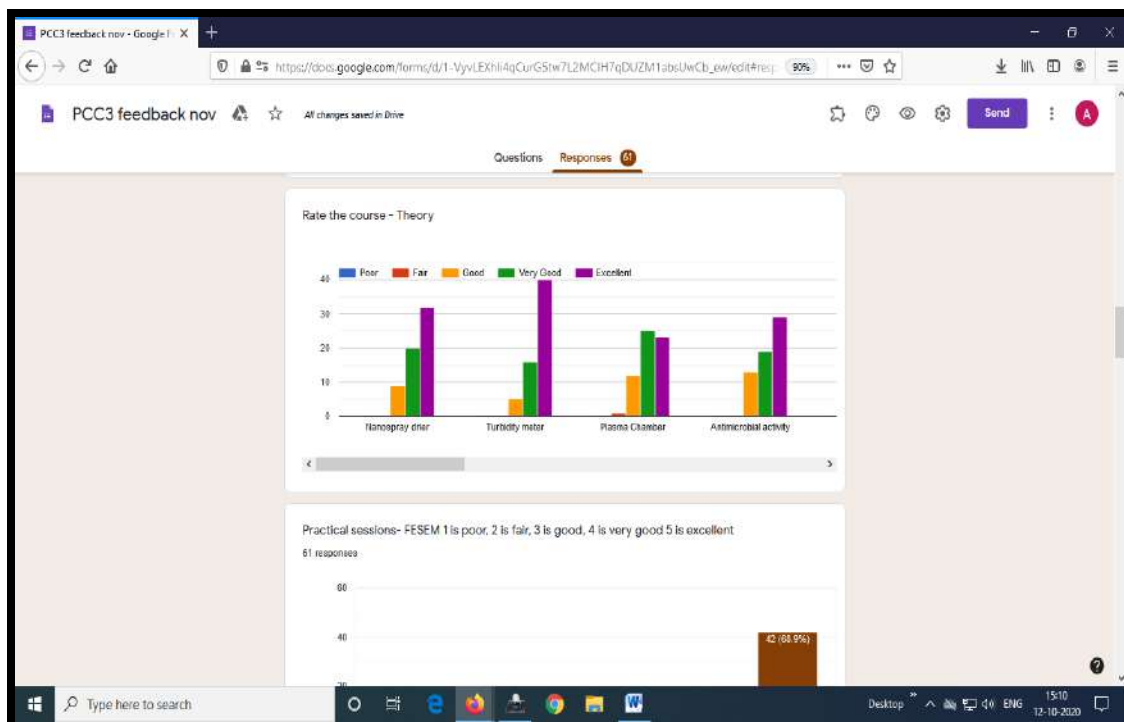
What were the most impressive aspects of the event?

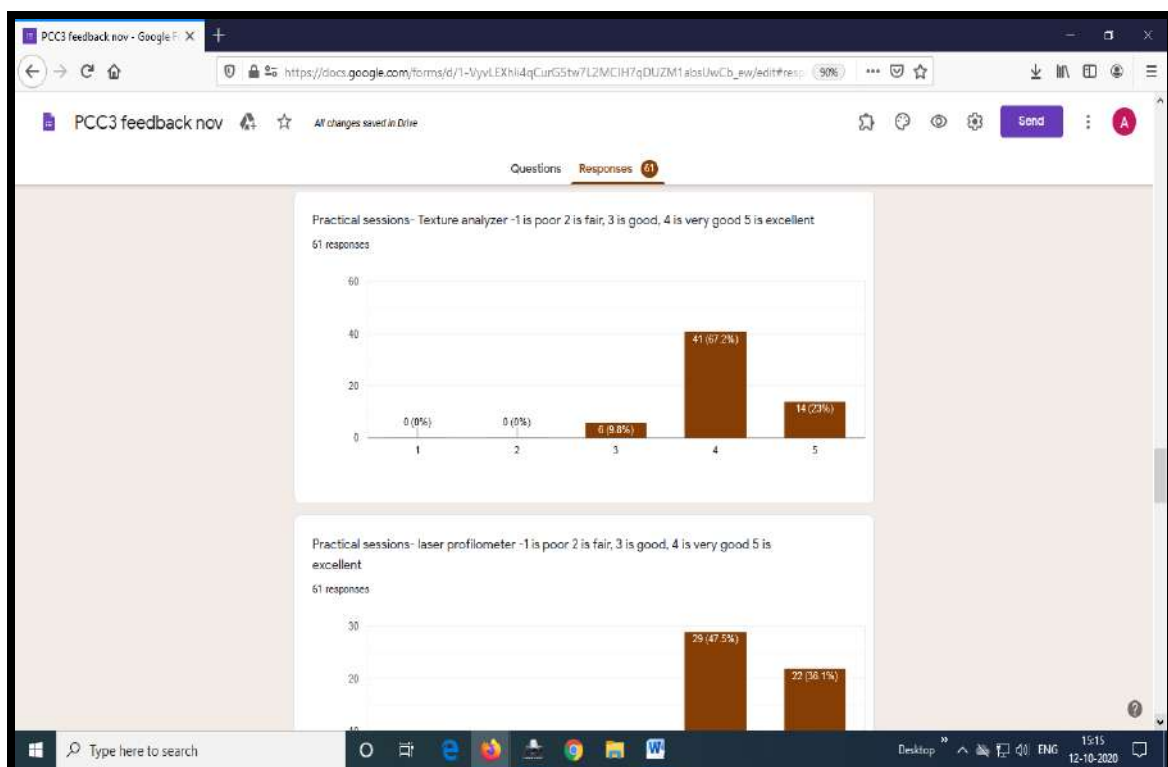
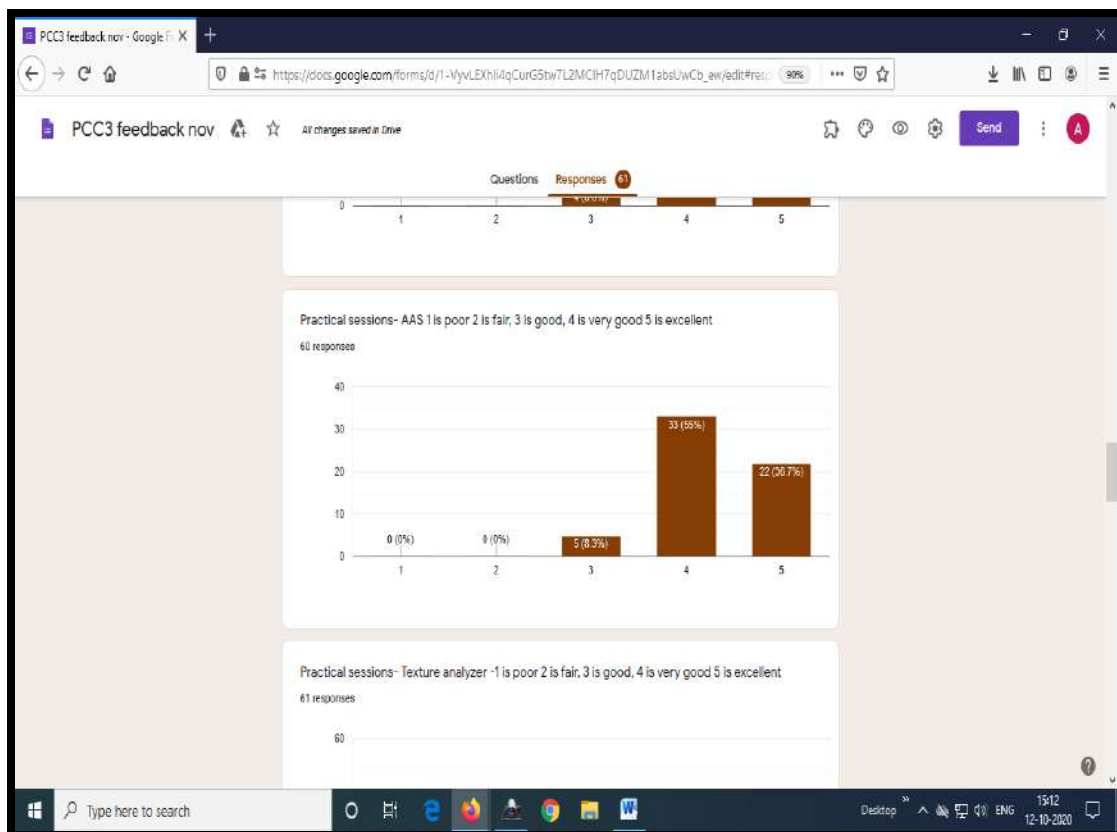
- XRD
- Practice sessions are impressive
- Demonstration
- FESEM

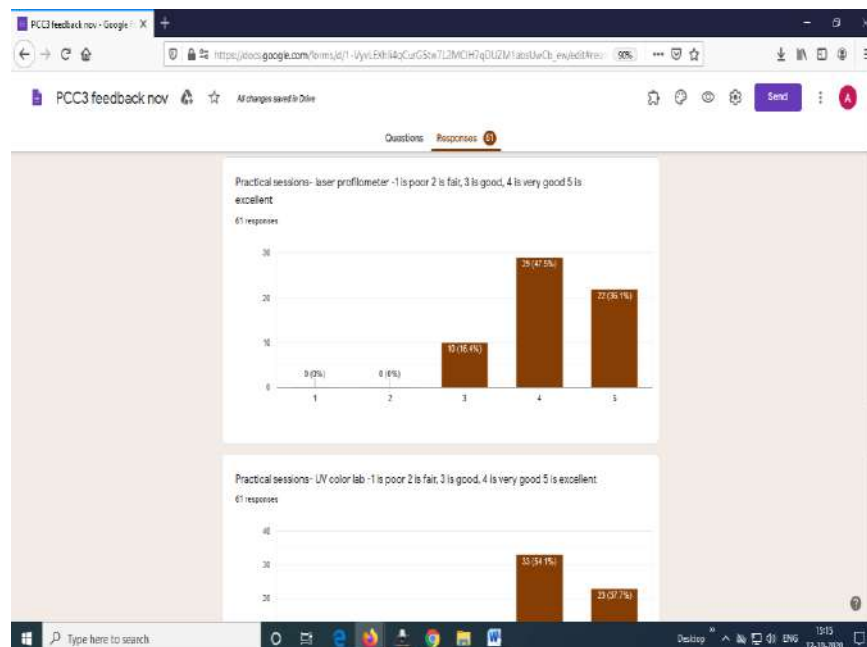
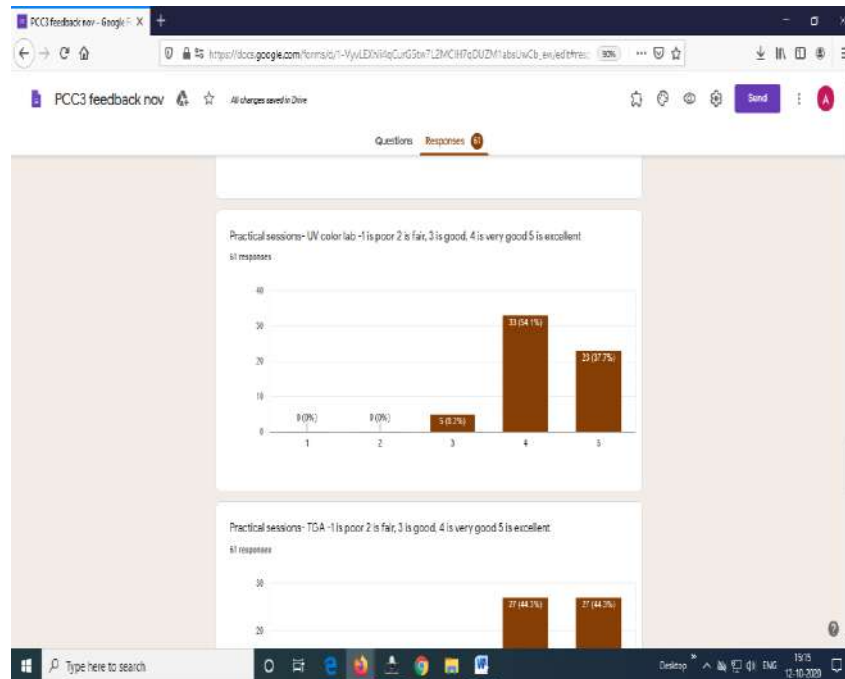
- Phytochemical techniques
- Nano spray drier and phytochemicals
- Practical session
- Within a time all the session are clearly explained and very interesting
- The effort teacher has to put to understand this online session better
- FE-SEM
- Lab session
- Practical session was very interesting
- The lecture session had loads of information which was so impressive
- Videos which were given and the tip of the day
- Practical section
- TGA and X-Ray Diffraction
- How use in technique in equipment
- The demonstration
- Explanation in more relatable and current terms.
- More information gathering through this course
- FE-SEM, 3d optical profilometer
- Nanotechnology
- Nanotechnology
- The practical session was the most impressive.
- The event was easily understandable, i really like the resources persons presentation. They present with small small clips and for practical class also good.
- Practical sessions..
- This course sessions are useful and get more informations including practical sessions
- Experiment demonstration
- Turbidity meter and x ray diffraction, TGA and DTA
- Demonstration videos and fesem
- FTIR spectroscopy
- Clearly and patiently explained all the sessions
- The way each and every resource explain the concept
- Phytochemical techniques
- The session will start at the correct time and no delay will be there. The practical sessions were very well organised even it is demonstrated as online.
- Demonstration video was very lively
- Interaction with experts
- Practical class were done clearly
- The videos and images are helpful to understand better.
- SEM ,Phytochemical techniques, nano spray technique and FTIR
- 1.Explanations along with examples which makes us understand the technique better.
- 2.Real time applications or articles which was during the sessions explained was really impressive
- 3.Extra tip for the day provided was useful and was able to feel the difference after taking up that tip mam.
- Timing was punctual and even it is on online the demonstration was good.
- Color lab
- Each section is carried out by the lecture specialised in that and demonstrations
- The demonstration part was most impressive for me.
- Practicals with Videos and quiz was more interesting
- Atomic Absorption spectrophotometer
- Through practical session we learned lots of the techniques and in theoretical sessions we learned the basics. both are very useful for us .

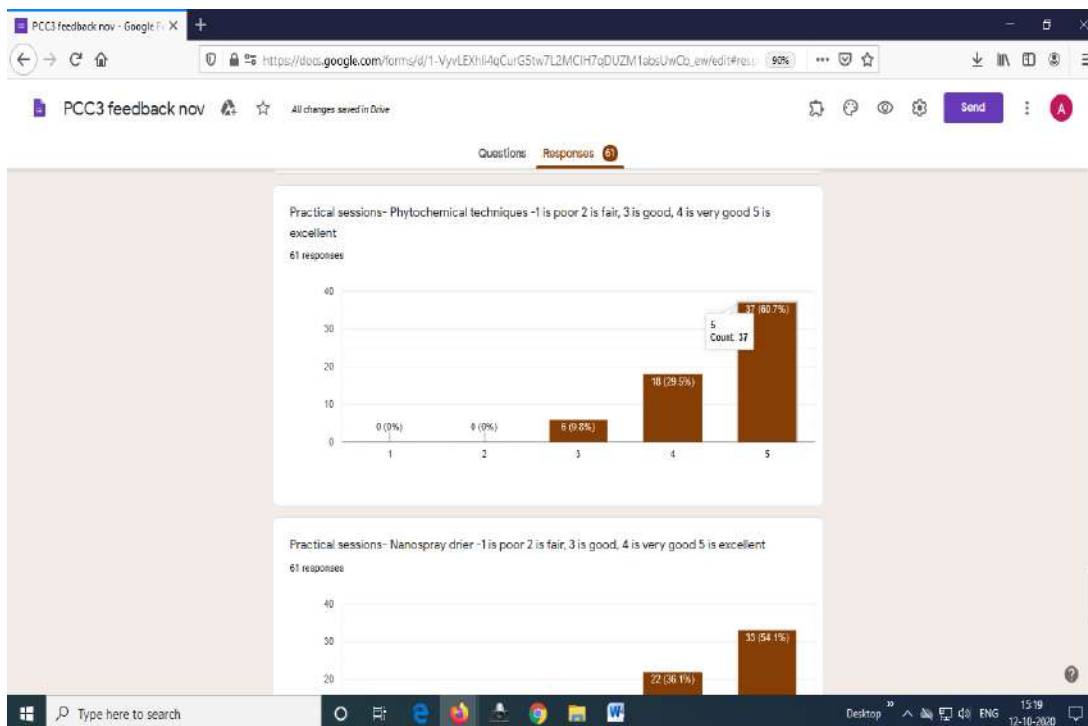
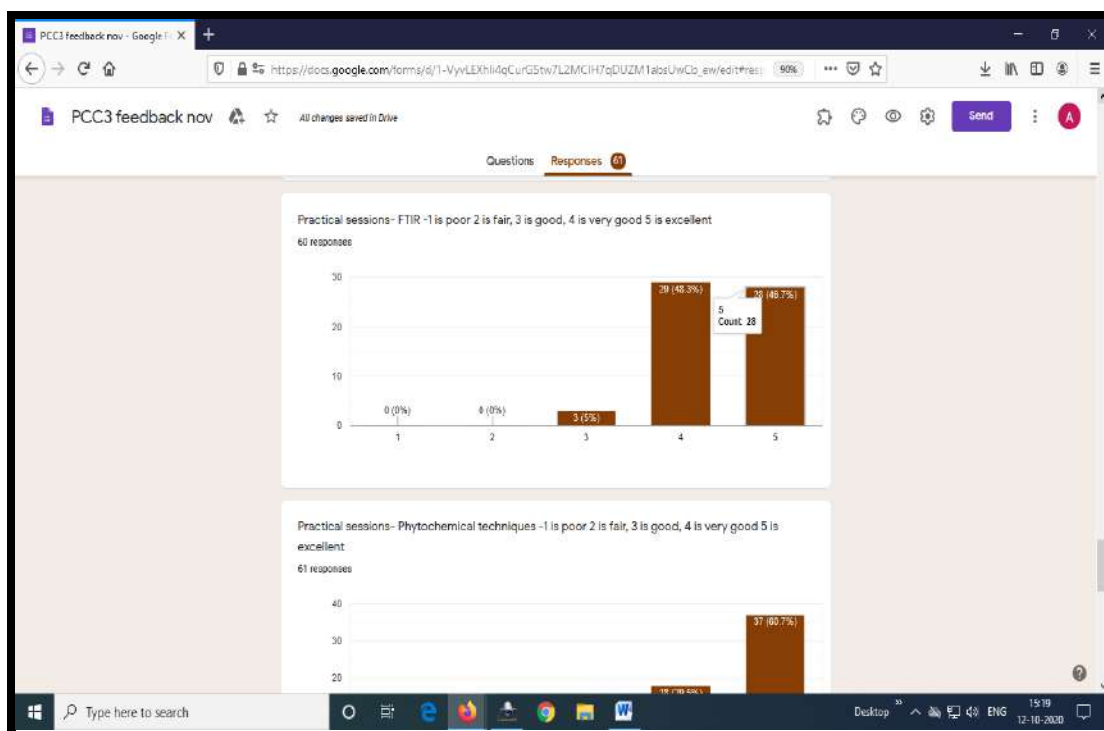
- Even in this situation we are able to attend the professional certification course which is very helpful for us in doing for research work. I have learned so many things which I don't know this is very helpful for me. Thanking you ma'am for your hard work and responsibilities.
- The video demonstrations were very useful for us, which increased the interest to know about the technique
- Initiative taken by the co-ordinator and resource people to explain all techniques with more examples in application aspect and also have made videos for our better understanding was impressive
- They way of teachers taking effort to make us more knowledge in all related topics.
- The practical demonstration is very impressive point in this whole event
- Teaching is about how to speak when attending a call, how to respond to a message, what kind of DP you should keep etc... And Scifinder it's very much impressive
- Turbitidy meter session
- Mams explanation
- Turbidity session
- Broad and elobrate explanation

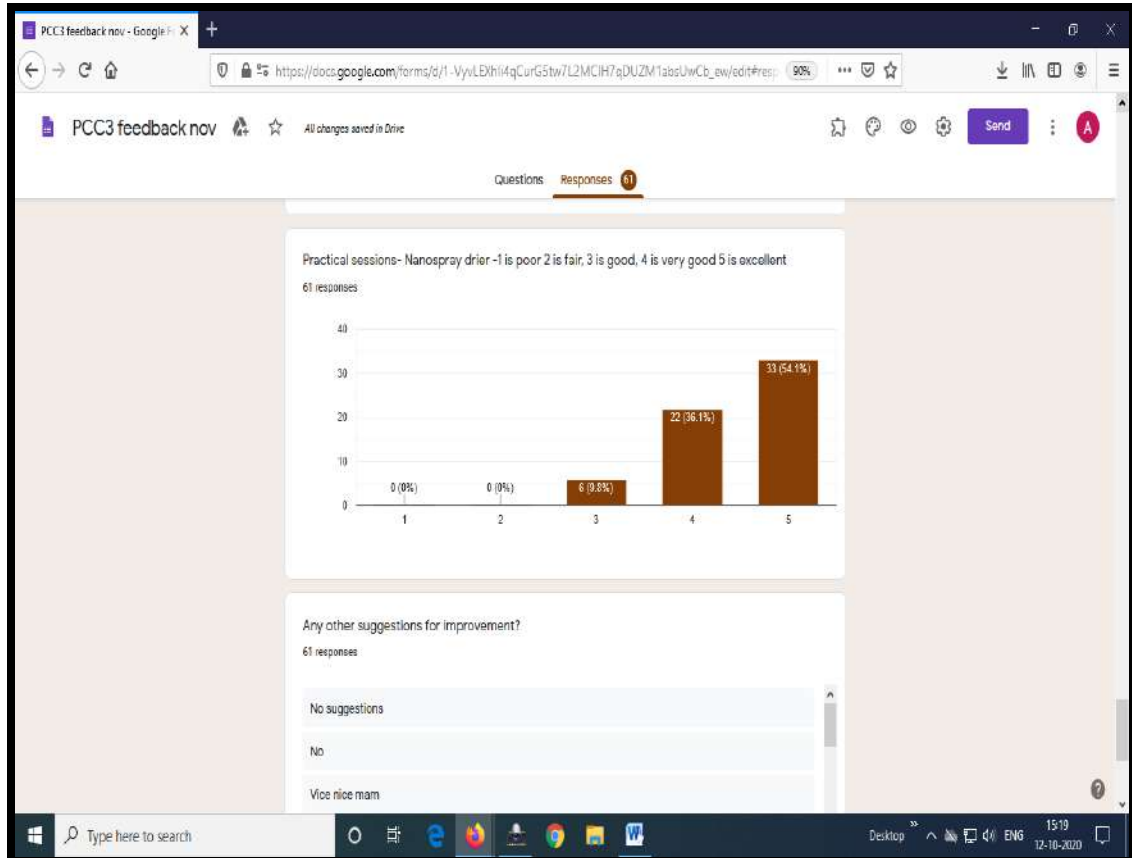
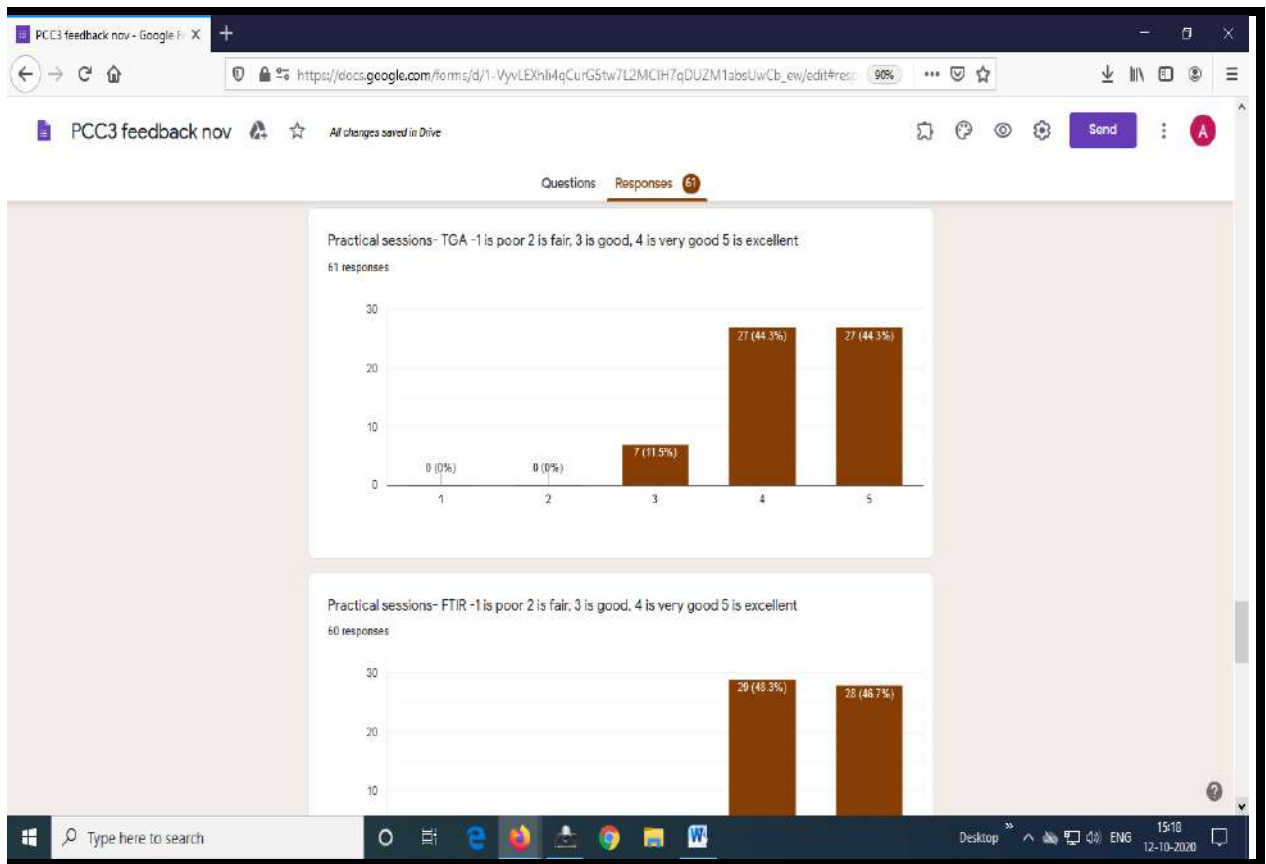












Any other suggestions for improvement?

- No suggestions
- No
- Vice nice mam
- Everything thing was perfect mam...no suggestions
- practical sessions wasn't to the level as it is a online class
- Vedio can be improved by size
- During the continuous session on Saturday only I feel bored.. Remaining all session is very nice and excellent .
- Every thing was good mam.
- Nil. The sessions were excellent.
- None
- No....i have learnt lot more techniques through this session
- No need for improvement
- No
- Practical session handled by Gayathri mam could be made with even more clarity and explanation made by her should be improved.
- Time limit can be extended so that we will learn still more deep about the techniques
- -
- Some more informative sessions about Raman spectroscopy , and practical session was very good.
- Yes mam .I will improment
- The course can be added with more videos for each session, so that it would be more effective than now.
- It's good.
- More expectations from practical session because video is not very clear and explanation good
- Videos which are shown during the practical session can be shared it will be very useful to recal
- Make the vedio session little more attractive
- Noting mam
- The session is starting on time.But the finishing time was little bit longer than the given time in schedule on some days. It extended nearly 40 mins one day. Except that teaching part and practical sessions and the way you teach was excellent.
- Only i miss the live classroom session. Other than that it's good.
- No suggestions mam..
- No Suggestions
- Time extended
- Only thing I felt some videos in practical session are speedy and one request to view those instruments after college reopening
- No suggestions but it will be more interesting if we got a chance to see the working all the equipment in real that will be more useful
- No suggestions
- At the practical session some videos are not clear mam
- Professional certificate course is perfect
- No suggestion. It is very clear session. Easyly understanding.
- Nil

- The practical demonstration video was very good but the clarity of the video is little bit blurry .
- In my opinion, some of the practical sessions (especially taken by the technician) has to be explained little more.
- No the session was good
- No suggestions. The course was literally useful and able to gain knowledge about various analytical techniques.
- Would be useful if we also have body composition analyser. Other things are organised very well and acknowledged
- no mam
- The additional information provided is informative and useful
- No. Very informative and clearly explain all demonstrations and classes
- I felt that XRD theory part was little tough to understand all the concepts in the presentation in a single class.
- All the sessions are well and good Thank you
- Due to the network issue sometimes we couldn't attend the whole meeting mam. The quality of video little low mam . Thank you for the wonderful sessions mam.
- The session was good ma'am.
- no specific suggestions.
- none
- In my thought want some space each topic to take class for understand and recognize the lecture because class was fast. So sometimes I couldn't follow.
- Few techniques were difficult to understand but it is well explained even if it is simplified it will be even more easier for us to understand
- If we have the chance to get the powerpoint is better
- I don't think that I can give any suggestions because all the sessions are good mam
- No more suggestions
- In practical session videos clarity is not good .Otherwise session is use full for me thanku you mam for this session
- No suggestion
- Your class is very excellent mam and I learn many information thank you mam

Report of Summer training (online internship programme) on Analytical Techniques in Research

Avinashilingam Institute for Home Science and Higher Education for Women, Coimbatore-641 043.



Avinashilingam

Institute for Home Science and Higher Education for Women

University

(Estd. u/s 3 of UGC Act 1956)

Coimbatore - 641 043, Tamil Nadu, India

(Deemed University under Category 'A' by MHRD)

Re-accredited with 'A' Grade by NAAC

“One-day training programme on FE SEM”

Venue: Bharat Ratna CNR Rao Research Centre

ABOUT THE WORKSHOP

The Department of Science and Technology under CURIE second phase sanctioned 1.5 crore for procuring FE SEM. This equipment has been housed in Bharat Ratna CNR Research Centre of our Institution. The equipment was installed in May 2018 and from then onwards every month this one-day training programme is being conducted to make aware of the outsourcing facility available to all researchers in and around our institution.

OBJECTIVES OF THE WORKSHOP

One of the main objectives is to make the researchers know the purpose of recording SEM images for their samples, difference between SEM and FE SEM images, basic principles of SEM, how they can customize their research work to utilize FE SEM facility and applications of FESEM in various fields of science and technology. With this aim the one-day training programme was framed to include theory sessions on FE SEM and EDS, training on sample preparation, recording and interpretation of samples.

Date	Number of Participants	Affiliation of participants	Fund generated For maintenance of CNR Rao Research centre and equipment (Rs.)
25 th May 2018 Workshop-1	11	Kongu Engineering College	16,500
		NGP College Pollachi	
		HKRH College, Uthamapalayam	
		Avinashilingam-Biochemistry dept	
		Zoology dept	

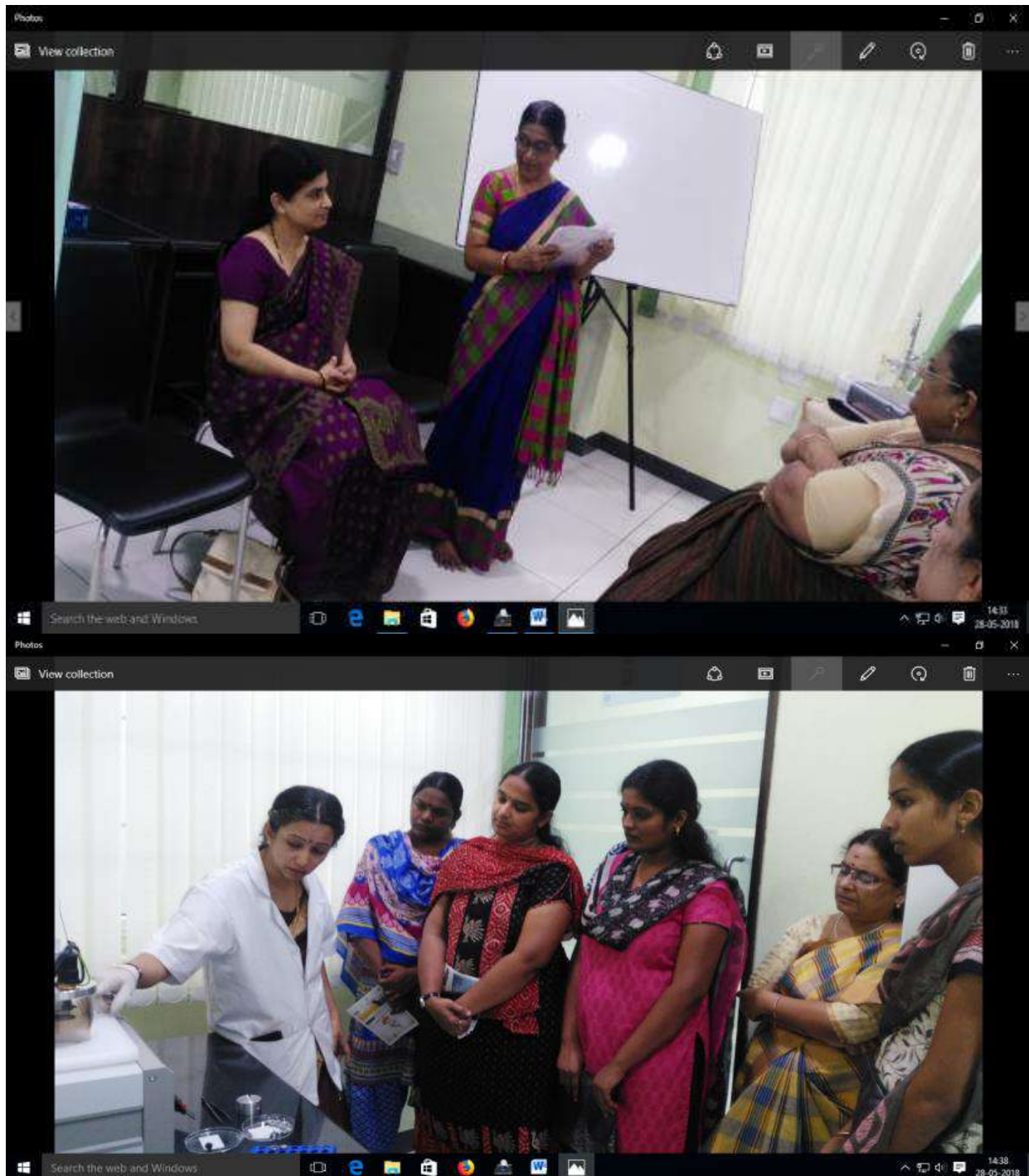
		Physics dept	
		Chemistry dept	
16 th June 2018 Workshop-2	15	Avinashilingam Institute for Homescience and higher education for Women	42,000
		Nehru Arts and Science College, Coimbatore	
		Hindustan college of arts and sciences, Coimbatore	
		M.I.E.T Arts and Science College	
		Sri GVG Visalakshi college for Women, Udumalpet	
		Dr. NGP Arts and Science College	
		Jayaraj Annapackiam college for women	
		SRKV college of arts and science, coimbatore	
		School of Engg. Avinashilingam University	
		Coimbatore Marine College, Coimbatore	
		Thiagarajar College	
21 st July 2018 Workshop-3	15	Coimbatore institute of technology	36,000
		Avinashilingam Institute for HomeScience and Higher education for women	
		SRMV CAS	
		INSPIRE ACADAMII, COIMBATORE	

		Bharathiar University	18000
		Nehru Arts and Science College	
		Government Arts College, Coimbatore	
		Anna University, Trichy	
18 th August 2018 Workshop-4	13	JSS College of science, Mysore	
		Kongu Engineering College, Erode	
		Avinashilingam Institute for HomeScience and Higher education for women	
22 nd September 2018 Workshop-5	17	Mother Teresa Women's University, Kodaikanal	29500
		Dr.N.G.P Arts and Science College, Coimbatore	
		Government Arts College, Coimbatore	
		Kongu Engineering College	
		PSGR krishnammal college for women	
		Avinashilingam Institute for Home Science	
		Nirmala College for Women, Coimbatore	
		Sri Jayachamarajendra College of Engineering	
24 th November 2018 Workshop-6	18	JKAMCAS, Gopichettipalayam	83000
		Avinashilingam Institute for Home Science	
		PSGR Krishnammal College for Women	
		Kongu Engineering College	
		VOC COLLEGE THOOTHUKUDI	
		Govt.College of Technology, Coimbatore	
		BHARATHIAR UNIVERSITY	
		Nirmala college for women	
		Vita Foods & Beverages (Boomerang Icecream)	

15th Dec 2018 Workshop-7	15	Salem Sowdeswari College	33000
		Govt.College of Technology,Coimbatore	
		Kongunadu arts and science college	
		PSG College of Technology	
		SRM university	
		Avinashilingam Institute	
		Nirmala College For Women, Coimbatore	
		SRMIST	
		PSG College of Arts & Science, Civil aerodrome ,Coimbatore - 641014.	
26th Jan 2019 Workshop-8	20	Avinashilingam Institute for Home Science and Higher Education for Women	92000
		Kongunadu arts and science college	
		Adhiyamaan College of Engineering , Hosur	
		Coimbatore Institute of Technology	
		Vellalar College for Women, Erode	
		Sri K G S Arts College, Srivaikundam	
		PSG college of Technology	
		Centre for Nanoscience and NanoTechnology, Anna University	
		VOC college, Tuticorin	
		Kamaraj College , Tuticorin	
23rd February 2019 Workshop-9	20	Sri Ramakrishna CAS	63500
		PSG institute of technology and Applied research	
		Central university of Tamilnadu	
		PSGR Krishnammal College for Women	
		VOC college Tuticorin	
		Kongunadu arts and science college	
		GCT, Coimbatore	
		PSG TECH	

		Anna University college of Engineering Trichy	
		Kamaraj college, Tuticorin	
		Avinashilingam Institute for H.Sc & Higher Ed. for women	
		Government Arts college, Coimbatore	
		Aditanar College of Arts and Science	
4th May Workshop-10	12	Kongunadu arts and science college	61500
		Madras Christian college	
		PSG CAS	
		DRDO BU CLS	
		VOC college, Tuticorin	
		Nanjil Catholic college of Arts and Science, Kaliyakkavilai	
		Bharathiar University	
21st June 2019 Workshop-11	16	Jai Shriram Engineering College	20000
		Adhiyamaan college of Engineering	
		Avinashilingam Institute for H.Sc & Higher Ed. for women	
		Total number of participants trained	172

Presidential address: Dr.A.Parvathi, Former Dean, Faculty of Science.
Resource person: Dr.Anuradha Ashok, Associate Professor of Material Science, PSG IAS, Coimbatore.



Demonstration of sputtering technique







15th December 2018

Participants of the 7th One-day training programme on FE SEM



8th One day training programme on FESEM- 26th January 2019



9th One day training programme on FESEM- 26th January 2019



10th One day training programme on FESEM- 4th May 2019



11th One day training programme on FESEM-21st June 2019

AVINASHILINGAM INSTITUTE FOR HOME SCIENCE AND HIGHER
EDUCATION FOR WOMEN
COIMBATORE- 641 043

One-day Training Programme on
"Field Emission Scanning Electron Microscope FESEM"

On
22nd September at 9.45 a.m

Programme

Registration: 9.30-9.45am

Inauguration : 9.45-10.15am

Prayer

Welcome and details of workshop : Dr.P.Lalitha
Associate Professor of
Chemistry

10.15-10.25 am : Tea break

on 1 : "Theory of Field Emission Scanning
10.25-11.25am Electron Microscopy"

Session 2 : Demonstration of Sputtering - gold sputtering
11.15 am-11.45 am and theory of Carbon sputtering of non-
conductive samples

Facilitator of the Programme : Dr.P.Lalitha
Associate Professor of Chemistry

Session 3 : FE SEM - sample handling techniques and analysis
11.45 am-12.45pm

12.45-1.30 pm : Working Lunch

Session 4 : EDS - Theory
1.30-2.00pm

Session 5 : EDS analysis-Elemental analysis, point
analysis 2.00-3.00pm and Mapping of elements

3.00 -3.30 pm : Tea break

Session 6 : Online feedback and closing session

3.30 pm-4.00pm

SWOC analysis

Strength of the Department:

- ✓ Dedicated staff members – regularity, punctuality and devotion to work:
- ✓ Congenial and conducive work atmosphere-A healthy, social and happy work environment helps the research Centre to energetically focus on the academic strength which helps the Centre to achieve targets well within the time-limits. The work gets accomplished successfully owing to the hardworking staff.
- ✓ Willingness of members “to go the extra mile”- Availability of teachers outside classroom and working hours to guide and to counsel
- ✓ Excellent relationship with outsourcers and other researchers
- ✓ Greener methods are being adopted to carry out experimental work
- ✓ State – of – art equipment facilities for characterization of materials

Weaknesses

- * Commercializing outcome of research
- * Lab to field studies to be pursued
- * Interdisciplinary research
- * Autonomy of few equipment – Technician not permitted to operate few equipment, few faculty not available on request
- * Lack of IMF facility for handling cylinders, that for each time labour charges are paid for changing cylinder.

Opportunities

- Funding sanctioned for immediate unforeseen maintenance work
- Interaction with research scholars inside and outside the institution
- Good perception factor for the Institution
- Good visibility

Challenges:

- ❖ Ability to meet current and future needs.
- ❖ Building Research interdisciplinary network





Sanitizer preparation in Bharat Ratna Prof.CNR Rao Research Centre





Sanitizer preparation in Bharat Ratna Prof.CNR Rao Research Centre

Constituents:

-  **Aloe vera extract**
-  **Iso propyl Alcohol**
-  **Tea tree oil**
-  **Glycerol**

Quantity prepared:

20 litres

Beneficiaries:

-  **28 Departments**
-  **Centres and Offices inside the Institution**