SCHOOL OF PHYSICAL SCIENCES

DEPARTMENT OF CHEMISTRY

The sustained endeavour of the Department of Chemistry, spreading over nearly two decades,in fostering the cause of Chemical Sciences in its catchment area,seems to have started yielding tangible results. In recognition of its contribution, this Department has become one among the prestigious Departments of Special Assistance (DSA) selected by the University Grants Commission for a period of 5 years. With this recognition, the Department is entitled to a total grant of around Rs.70 lakhs for purposes of a further strengthening of academic activities constituted by teaching and research. this is a recognition, in addition to what this Department had, in the form of the UGC-sponsored programme- committee on Strengthening of Infrastructure in Science and Technology (COSIST) - the first phase of which has recently been successfully completed by this Department.

It has been a well-known fact that academic distinctions have been conferred periodically on the senior faculty members since the inception of this Department.

Head of the Department : Professor M.K.Chaudhuri.

Faculty :

	Name.	Designation	Specialization.
1.	Dr. M.K.Chaudhuri	Prof.& Head.	Inorganic Chemistry.
2.	Dr. H.Junjappa	Professor.	Organic Chemistry.
3.	Dr. T.S.R. Narasaraju.	Professor.	Physical Chemistry
4.	Dr.(Mrs)H. Ila.	Professor.	Organic Chemistry.
5.	Dr. S.N.Bhat.	Professor.	Physical Chemistry.
6.	Dr.M.P.Mahajan .	Professor.	Organic Chemistry.
7.	Dr.M.K. Mahanti.	Professor	Physical Chemistry.
8.	Dr.P.K.Poddar	Reader	Inorganic Chemistry.
9.	Dr.S.N.Rai.(on lien)	Reader	Theoretical Chemistry.
10.	Dr.K.Ismail.	Reader	Physical Chemistry.
11.	Dr. K.K.Dwivedi	Reader	Inorganic chemistry.
12.	Dr. H.Chandra.	Reader	Physical Chemistry.
13.	Dr. B.Myrboh	Reader	Organic Chemistry.
14.	Dr.S.Aravamudhan	Lecturer.	Physical Chemistry.
15.	Dr.S.Goswami.(on lien)	Lecturer.	Inorganic Chemistry.
16.	Dr.Z.Hiese (on leave).	Lecturer.	Inorganic Chemistry.
17.	Dr.R.H.Duncan Lyngdoh	Lecturer.	Physical/Organic Chemistry.
18.	Dr. A.Lemtur.	Lecturer.	Physical Chemistry.
19.	Dr. F.M.Nongrum.	Lecturer.	Organic Chemistry.
1	Dr.Surajit Chattopadhyay.	Visiting Fellow.	Inorganic Chemistry.
2.	Dr.Alok Srivastava.	Scientific Pool	Physical Chemistry.

Officer (CSIR)

Students intake:

(i) M.Sc.
(a) Enrolment Capacity : 29
Actual Admission under the headings :

General	SC/ST	Male	Female	Total
10	19	15	14	29

(ii) M.Phil. : Nil
(iii) Ph.D. : 3

Courses conducted (Titles only) :

M.Sc

1.	CHEM - 401	Inorganic Chemistry - I
2.	CHEM - 421	Organic Chemistry - I
3.	CHEM - 441	Physical Chemistry - I
4.	CHEM - 461	Quantum Chemistry.
5.	CHEM - 402	Laboratory Course in Inorganic Chemistry.
6.	CHEM - 403	Inorganic Chemistry - II
7.	CHEM - 422	Organic Chemistry - II
8.	CHEM - 442	Physical Chemistry - II
9.	CHEM - 462	Chemical Bonding and Molecular Spectroscopy
10.	CHEM - 423	Laboratory Course in Organic Chemistry.
11.	CHEM - 404	Inorganic Chemistry - III
12.	CHEM - 424	Organic Chemistry - III
13.	CHEM - 443	Physical Chemistry - III
14.	CHEM - 463	Applications of Spectroscopic Methods
15.	CHEM - 444	Laboratory Course in Physical Chemistry.
16.	CHEM - 464	Analytical Chemistry and Computers.

Elective Courses:

17.	CHEM - 501	Inorganic Chemistry - IV
18.	CHEM - 521	Organic Chemistry - IV
19.	CHEM - 541	Physical Chemistry - IV

Project works :

20.	CHEM - 511	Project Work (Inorganic Chemistry)
21.	CHEM - 531	Project Work (Organic Chemistry)
22.	CHEM - 551	Project Work (Physical Chemistry)

(a) Seminar/Conferences/Symposia/Extension Programmes Organized/Attended :

Name	Conference	Place/Date	Title of talk
1.Prof.H.Jumappa	Invited Lecture	i)University of Bordeaux France (May.16,1994)	"New Strategy for Heterocyclic synthesis.
		ii)University of Clermont, Ferrand , France (June 7,1994)	"New general methods for aromatic and Heterocyclic
		iii)University of Caen, Caen,France (June 17,1994)	Chemistry of Cyclo-pentenoids via 1-Oxo ketenedithioacetals.

	iv) University Joseph Fourier, Grenoble, (June 23, 1994)		Aromatic annelation via α-Oxoketene dithioacetals
	v) University of Paris, Paris, France (June 24, 1994)		Group discussion
	vi) Amsterdam N.V. Organon, The Netherlands (July 4, 1994)		New strategy for five membered heterocyclic Synthesis
	vii) University of Konstanz, Konstanz, Germany (July 6, 1994)		Aromatic annelation using α-Oxoketene dithioacetals.
	viii) University of Konstanz, Konstanz, Germany. Plenary Lecture in the 16th International Symposium on "Organic Chemistry of Sulfur"		α-oxoketene dithioacetals as intermediates for aromatic annelation
2. Prof. M.K. Chaudhuri	Invited Lecture	IIT, Kanpur Seetember 1994	"Fluoride-assisted stabilization of unusual oxidation states of metals and aqueous synthesis of fluorometallates"
3. Prof. S.N. Bhat	Refresher Course	Dibrugarh University	Molecular Spectroscopy
4. Dr. K.K. Dwivedi	i) National Workshop	Bhabha Atomic Research Centre, Bombay (Nov. 22-24, 1994)	Invited Paper on Ubiquitous (Radon) ([illegible] - 94)
	ii) 31st Annual Convention of Chemists.	Benaras Hindu University, Varanasi (Dec. 21-24, 1994)	Invited Paper
	iii) 9th National Symposium on Solid State Nuclear Track Detectors (SSNTD - 95)	Bhabha Atomic Research Centre, Bombay (March 8-10, 1995)	Invited Paper
5. Dr. R.H.D. Lyngdoh	National Symposium on "Cancer Research: Bridging the Gap	North-Eastern Hill University, Shillong.	Convener and Organizing Secretary

between Laboratory and Clinic" (Feb.6-8,1995)

(b) Refresher Courses conducted by the Department :

The Department had conducted two refresher courses for College and University teachers. The first course was held from July 11th to August 1st 1994,and Professor T.S.B.Narasaraju was the Course coordinator. Two external resource persons were invited to deliver lectures to the participants. They were Dr.B.C. Ranu of the Indian Association for the Cultivation of Science, Calcutta, and Professor O.K.Medhi of Gauhati University, Guwahati. The second course ran from November 19th to December 9th,1994, and the course coordina-tor was Dr.B.Marboh. The external resource persons invited to deliver lectures for for this course were Dr.A.J.Boulton of the University of East Anglia, Norwich, UK, Dr.H.B.Sigh of IIT,Bombay, Dr. K.C.Majumdar of Kalyani University, Dr.T.C.Galagher of the University of Bristol, UK, and Professor O.K.Medhi of Gauhati University, Guwahati.These courses were sponsored by the UGC.

Visiting Professor/Fellows :

Sl.No.	Name of Speaker	Topic	Date
1.	Dr.B.C.Ranu Indian Association for the Cultivation of Science,Jadavpur, Calcutta	"Strain-Assisted Synthesis Involving Cyclobutane Rearrangement and Fragmentation"	21.7.94
2.	Dr. A.J.Boulton University of East-Anglia,Norwich(U.K.)	"Nomenclature in Heterocyclic Chemistry	19.11.94 21.11.94 22.11.94
3.	Dr.T.C.Galagher University of Bristol, Bristor (U.K.)	"Regiospecific Enolates as Building Blocks in N-and O-Heterocyclic Synthesis"	5.12.94

Publications :

1. Ravishanker, H.N.,Chaudhuri, M.K. and Ramasarma, T.,"Oxygen exchange reactions accompanying oxidation of vanadyl sulfate by disperoxova-nadate"
Inorg. Chem., 33 : 3788 (1994).

2. Bhattacharjee,M., Chaudhuri,M.K., Mandal,G.C. and Srinivas,P., "Direct Synthesis of anhydrous alkali metal tetrafluorodi-oxouranates(VI) monohydrates"
J. Chem. Soc. Dalton Trans., 2693 (1994)

3. Bhattacharjee, C.R.Chaudhuri, M.K. and Chettri, S.K., "Peroxo complexes of Ti (IV) and U(VI)".
Inorg. Synth.,32 :in press (1995).

4. Chaudhuri,M.K.,Chettri, S.K., Mandal, G.C., Paul, P.C.,Paul, S.B. and Srinivas, P.
"Reactivity investigations of some chosen peroxovanadium (v), manganese (III) and chromium (VI) compounds",
Proc. Ind. Acad. Sci (chem. Sci) 107 : In press (1995).

5. Sarkar, S.C. and Poddar, R.K.,
"Cationic complexes of ruthenium (III) and ruthenium (II) with triphenylphosphine and other ligands",
Synth. React. Inorg. Met. Org. Chem., 24 : 457 (1994).

6. Ghosh, S., Raju, J. and Dwivedi, K.K.,
"Track lengths of energetic 132 Xe ions in CR-39 detectors"Radiat. Effects and Defects in Solids. 129 : 155 (1994).

7. Dwivedi, K.K.,
"Radon measurements in earthquake prediction",
Bull. Radiation Protection, 17 : 57 (1994).

8. Bhattacharyya,A., Raju,J., Saxena,A., Ghosh,S. and Dwivedi, K.K.,

"Response of solid dielectrics to the registration of fission product tracks",
Rad. Eff. Def. in solids, 133 : (1995) in press.

9. Saxena, A., Ghosh, S., and Dwivedi, K.k.,
"Mean ranges of 132 Xe in lead"
Nucl. Sci. Journal, (1995) in press.

10. Dwivedi,K.K...,Ghosh, S. and Raju,J.,
"A track technique for the measurement of target thickness using heavy ions",
Radiation Meas., (1995) in press

11. Ghosh, S., Raju. and Dwivedi, K.k.,
"Etchable track lengths of 3.56 GeV 208 Pb in various dielectric solids",
Radiations Meas ., (1995) in press

12. Bisplinghoff, B., Bradnova, V., Brandt, R., Dwivedi, K.K., Butsev,V.S., Friedlander, E.M., Ghosh, S., Guo Shi-Lun, Heck, M., Jin Huimin, krivopustov, M.I., Kulakov, B.A,Laue, C., Lerman, L., Th. Schmidt, Sosnin, A.N. and Wang Yu-Lan,
"On neutron generation in Massive Cu-targets during the irradiation with 22 and 44 GeV Carbon Ions",
J. Radioanal. Nucl. chem., 189 : 191 (1995).

13. Abdullaev, I.G.., Adloff,J.C., Berzina,I.G., Bisplinghoff,H., Bradnova,V., Butsev,V.S., Cui,H.H., Debeauvais,M., Dwivedi,K.K., Friedlander E.M., Ghosh,S., Guo,S.L., Heise,S.,Krivopustov,M.I., Kulakov,B.A, Langrock,E.J., Laue,C., Lerman,L., Perelygin, V.P., Th.Schmidt Sosnin, A.N., Vater, P., Vonderau,A., Wang,X.L. and Zamani,M.,
"Neutron Production in Extended Cu-Targets Irradiated with Relativistic 12 C-ions at Dubna, as Dubna, as studied with SSNTD and Nuclear Chemistry".
Radiation Measurements, (1995) in press.

14. Narasaraju, T.S.B. and Phebe, E.,
"Preparation and characterization of hydroxyl and iodide apatites of calcium and their solid solutions",

J. Mat. Sci. Lett., 14 : 229 (1995).

15. Narasaraju, T.S.B. and Phebe, E.
"Some physicochemical aspects of hydroxylanatites :A review",
J. Mat. Sci., in press (1995).

16. Dutta, R.K., Chouahury, R. and Bhat, S.N.,
"Effect of association sulfonaothalein dyes with sodium dodecyl sultate micelles on their acid -base equilibria",
J. Chem. soc. Faraday Trans, in press (1995).

17 Nongkynrih,I. and Mahanti, M.K.,
"Kinetics and mechanism of the oxidative cleavage of unsaturated acids by quinolinium dichromate",
Bull. Chem. Soc. Japan, 67 : 2320 (1994).

18. Burman. T.K., Paul, B.C. and Ismail, K.
"Visible spectra of methyl red in bensene water microemulsions",
Bull. Chem Soc. Japan, 67 : 3349 (1994).

19. Chettri, S.K.., Dev. S. and Ismail, K.,
'Density and electrical conductance of calcium nitrate tetrahydrate + acetamide melt",
J. chem. Eng. Date, 40 : 12 (1995).

20. Simons, M.C.R.,chandra, H. and Wyatt, J.L.,
"Electron paramagnetic resonance spectra of irradiated finger nails : A possible measure of accidental exposure",
J. chem. soc. Faraday Trans., in press (1995).

21. Sharma,A.K.., Mukherjee,S.M.., Mazumdar, S.N.and Mahajan, M.P.,
"[4+2] Cycloaddition reactions of 1,3-diaza-1.3-butadienes with haloketenes accompanied by novel rearrangements",
Tetrahedron, 50 : 7579 (1994).

22. Sharma, H.K. and Mahajan. M.P.,
"Syntnesis of 5-isopropenyl/vinyl substituted pyrimidones via(4+2) and unusual [3+2] cycloaddition reactions with a-nitrosostyrenes"
Heterocycles, 40 : 787 (1995).

23. Mathew, F.M. and Myrboh, B.,
"Synthesis of diarylmethanes Friedel-Crafts condensation of benzalazines with aromatic hydrocarbons",
Synthetic Comm., 1994.

24. Lyngdoh. R.H.D.,
'Mutagenic role of Watson-Crick protons in alkylated DNA bases: A theoretical study".
J. Biosci., 19 : 131 (1994).

25. Venkateswarlu. D. and Lyngdoh, R.H.D.., 1
"Steric, structural and energetic requirements for induction of points mutations by alkylated guanines and thymines".
J. chem Soc. Perkin Trans. 2, 839 (1995).

26. Patro.B.Deb,B., Ila, H. and Junjappa, H.,
"Rearrangement studies on 3,3-bis(methylthio)- 1-(arylcyclopropanyl)-2-propen-1-ols:synthesis of functionalized cyclopentenes and polyene esters".
Tetrahedron, 50 : 255 (1994).

27. Ch.Rao,S., Chandrasekhram,M, Patro B., Ila.,H. and Junjappa,H.
"Facile one pot thermal dehydration and dethioacetalization of B-hydroxydithioacetals with dimethyl sulphoxide : synthesis of a,B-unsaturated aldehydes',
Tetrahedron, 50 : 5783 (1994).

28. Bhat, L.,Ila, H. and Junhappa, H.,
"Rearrangement studies on acylketene o-prop-2-ynyl s-methylmonothioketals",
J. Chem. Soc., Perkin Trans, 1 : 1749 (1994).

29. Reddy, K.R.,Singh, L. W., Ila., H., Junjappa, H.,
"Highly diastereoselective anionic [3+2] annulation strategy for functionalized cyclopentenes via a-oxoketene dithioacetals".
J. Chem.,Perkin Trans. 1 : 2439 (1994).

30. Mehta, B.K., Ila, H., Junjappa, H.,
"Highly chemoselective and stereoselective conjugate addition of benzyl copper reagents to a-oxoketene dithioacetals".
Tetrahedron Lett. : 1925 (1995)

Thrust Areas of Research

Research activities in organic chemistry have focused attention on developing newer synthetic methods for important heterocyclic and carbocyclic compounds of biological relevance. A number of such compounds are being screened for assessment of their activity. Synthetic and mechanistic studies on cycloaddition reactions of novel azadienes and oxyplumbation reactions have also been carried out.

Research activities in Physical Chemistry include work in solid State Chemistry with emphasis on isomorphous substitution on hydroxylapatite., solubility equilibria of solid solutions of apatites, organic semiconductors, nuclear interactions involving charge-transfer complexes, hydrogen bonding and hydrophobic interactions, and micelles. Research in Chemical dynamics pertains to electron-transfer processes, the use of newer reagents for oxidation and the design of novel methods for transition metal compounds derived from the reduction of transition metal ions by sodium tetrahydroborate. Work on the transport behaviour of electrolytes in aqueous and molten media as a function of temperature and pressure are actively pursued. In addition, theoretical studies on vibrationally excited states are in progress.ESR studies on single electron transfer reactions and free radicals using spin trapping are also carried out.

Research activities in Inorganic chemistry address to the synthesis, characterization,evaluation of molecular structures by different techniques and studies on reactivity of fluoro, peroxo dioxygen and B-diketonato-metallates, and fluoro and peroxo

compounds of on metals, sulfoxide and arylazo complexes of transition metals. Emphasis is also given on the stabilization of unusual oxidation states of metals, and the development of newer reagents and catalysts. Research activities related to Nuclear chemistry include heavy ion range and energy loss in solids, development of track detectors, fusion-fission and particle evaporation, random monitoring and measurement of trace pollutants in the environment.

Research Programme/Research Projects (New) :

The Department has several ongoing research projects,sponsored by different funding agencies. In addition, the following new Research Projects have been initated in the period under report :

Name	Title of the Project.	Funding Agency.
1.Dr. Myrboh	"Synthetic Studies on Lead(IV)Acetate Oxidations"	Council of Scientific and Induatrial Research(CSIR)
2.Dr.B.Myrboh	"Study on Minor Non-Wood Forest Products, Medicinal Plants and their Selective Extraction"	IFAD sponsored North-Eastern Region Community Resource Management Project (North-Eastern Council)
3.Dr.R.H.Lyngdoh	"Theoretical Investigations on Codon-anticodon Pairing and the Genetic Code"	Department of Science and Technology(DST)

Any other Remarks:

The following students were awarded the Ph.D.Degrees in chemistry

Name of the Student	Surpervisor
P. Srinivas	Prof. M.K.Chaudhuri
R.K.Datta	Prof. S.N.Bhat
B.C.Paul	Dr.R.K.Poddar

Involvement of Faculty on External Academic Bodies

Prof. M.K.Chaudhuri has been nominated as a Member of the Science and Engineering Research Council (SERC) of the Department of Science and Technology (DST), Ministry of Science and Technology, Government of India for the period 1994-97. He has been renominated to the programme Advisory Committee (PAC) in Inorganic chemistry of the (DST) for the period 1994-96. In addition to these responsibilities, Prof.Chaudhuri has been nominated as Member of the Board of Management of Tezpur University, Tezpur, for 1994-97 and a member of the Research Council of the Regional Research Laboratory (RRL),Jorhat.
Dr.K.K.Dwivedi was nominated as a Member of the Organizing Committee for the National Workshop in Ubiquitous Radon (NWSUR - 94) and Solid State Nuclear Track Detectors (SSNTD - 95).

Professor H.Junjappa has been nominated to the Programme Advisory Committee (PAC) in organic chemistry of the (DST) for the period 1994-1997. He has been also nominated as a member to the Research Council of the Indian Institute of Chemical Biology, Calcutta for the period 1994-97.

Dr. S.Goswami. Lecturer in chemistry, has been chosen for the coveted UGC-Career Award for a period of 3 years. This has been given to Dr.Goswami, based exclusively on the research work carried out by him in this Department.

2. DEPARTMENT OF MATHEMATICS

The department of Mathematics completed 21 years of its existence in 1995. It continues to devote itself to post-graduate teaching and research in various branches of Mathematics.

Head of the Department : Prof. M.B.Gege.

Faculty :

Name	Designation	Specialisation
1. Dr. Vijai Kumar (upto Dec.31.1994)	Professor	Computer Programming
2. Dr.S.S.Khare	-do-	Algebraic Topology
3. Dr.M.B.Rege.	-do-	Ring Theory
4. Dr. S.K.Srivastava	Reader	Theory of Relativity
5. Dr.H.K.Mukherjee	-do-	Algebraic Topology
6. Dr.P.K.Saikia.	-do-	Algebraic mber Theory.
7. Dr.B.K.Dev.Sarma	-do-	Fluid Mechanics & Maths. Education.
8. Shri. A.L.Marbaniang.	Lecturer.	Operations Research.
9. Dr.(Ms)C.R.Mondal	-do-	Oceanography
10. Dr. A.K.Das.	-do-	Algebraic Topology.

Student Intake and award of degrees :

(a) Enrolment Capacity : 20
(b) Actual Admission : 7
M.A/M.Sc. Male(Sc/St) :2 Male (Genl). :3
Female (Sc/St):1 Female(Genl.) :1
(c) Ph.D. : Mr.B.S.Koikara has been awarded the degree of Doctor of Philosophy. He worked with Dr.H.K.Mukherjee

Courses conducted :

Semester I 1994-95 batch : (a) Linear algebra, (b) Analysis I, (c) Ordinary Diff Equation, (d) Classical Mechanics.

Semester III 1994-95 Batch :(a) Analysis II, (b) Topology (c) Partial Diff.Equation, (d) Differential Geometry.

Semester III 1993-94 batch : (a) Complex Function Theory, (b) Computer Programming, (c) Algebraic Topology, (d) Fluid Mechanics.

Semester IV 1993-94 batch : (a) Theory of Relativity, (b) Elementary Number Theory.(c) Algebraic Topology II, (d) Operation Research.

Seminars/Conferences/Symposia/Extension Programmes organised :

The Department continued to organise the Indian National Mathematical Olympiad (INMO) at Shillong centre and co-ordinate the conduct of Regional Mathematical Olympiad in the N.E.Region for the tenth consecutive year. This Year's INMO was preceded by a week-long training camp for INMO candidates from N.E.Region held in NEHU.This Camp was organised with the financial assistance received from the North-Eastern Council.Nearly twenty Candidates from Shillong,Agartala, Udaipore,Guwahati and Tezpur participated in the camp.Among persons who coached the students or rendered organisational help there were :Prof.Vijai Kumar, Prof.Y.S.T.Rao, Prof.M.B.Rege, Ms.Sima Chhawchharia,Mr.S.K.Singh, Mr.V.I.James, Dr(Ms)M.Ibemhal Devi,Dr.N.J.Dev(Lady Keane-College), Prof.P.Bhattacharya(Tezpur), Dr. K.C.Choudhury(Guwahati)Dr.A.Sinha (NERIST), Mr.L.Budhichandra Singh (Imphal).

Publications :

1. Srivastava.S.K. "Solution of Direct equation in singularity-free Kaluza-Klein Cosmological model". Int. J. Theo.Phys.33(4) (1994) 805-818.
2. Srivastava.S.K.and Sinha.K.P. "Some consequences of dual nature of Ricci scalar in the early universe". J. Ind. Math.Soc. 61 (1994)80-86.
3. Srivastava.S.K. "Fundamental constants in singularity free five dimensional Kaluza-Klein Cosmological model". Int. J.Theo.Phys.34(1) (1995) 125-141.
4. Srivastava.S.K. and Sinha ,K.P. "Dual nature of Ricci scalar and creation of spinless particles". Pramana(1995)in press.

Thrust Area of Research : Pure and applied mathematics.

Award/Prize/Certificate etc. won by the faculty members :

Dr. S.K.Srivastava has received Meghanad Saha Award for theoretical sciences under Hari Om Ashram Trust Awards for 1993, given by U.G.C.

3. DEPARTMENT OF PHYSICS

Physics Department was established in 1976 with a view to build the scientific manpower in this part of the country. The department offers post graduate education leading to M.Sc.M.Phil and Ph.D. degree in physics. The teaching programmes are suported by good research facilities in the areas of laser physics/spectroscopy.Nuclear physics,particle physics/High-Energy physics and Solid State Physics.

Head of the Department : Prof. Kamal Kumar.

Faculty :	Designation	Specialisation.
1. Dr.A.L.Verma	Professor	Experimental Laser Physics
2. Dr.C.S.Shastry	Professor	Theoretical Nuclear Physics
3. Dr.T.S.T.Rao	Professor	Theoretical Nuclear Physics and Many Body Problems.
4. Dr. P.Shukla.	Professor	theoretical Solid State Physics.
5. Dr. R. Singh (On leave)	Professor	Experimental Nuclear Physics.
6. Dr.Kamal Kumar.	Professor	Experimental Laser Physics
7. Dr. Y.S.Jain	Reader	Molecular Physics/Solid State Physics/Laser Physics.
8. Mr.D.T.Khathing (on deputation to RSIC)	Reader	Experimental Nuclear Physics
9. DR. P.N. Pandita	Reader	High Energy Physics/Particle Physics.
10.Dr. P.N.Ram.	Reader	Solid State Physics/Condensed matter Physics.
11.Dr. N.K.Parida.	Reader	High Energy Physics/Elementary Particle Physics
12.Dr(Mrs). B.M.Jyrwa.	Reader	Theoretical Nuclear Physics
13.Dr.P.K.Bajpai	Lecturer	Solid State Physics
14.Dr.P.Nanakmrih	Lecturer	Experimental Nuclear Physics.

Students Intake.

(a) Enrolment Capacity 15(Fifteen) M.Sc.

(b) Actual admission in M.Sc.

	SC/ST	General	Total
Male	7	3	10
Female	3	2	5
Total	10	5	15

Ph.D	SC/ST	General	Total
Male		3	3
Female	1	3	4
Total	1	6	

COURSES CONDUCTED

M.Sc.

1. Classical Mechanics
2. Quantum Mechanics I
3. Mathematical Physics
4. Laboratory-I
5. Electronics
6. Electrodynamics
7. Quantum Mechanics-II
8. Laboratory-II
9. Nuclear Physics (531)
10. Solid State Physics (Phys./532)
11. Atomic and Molecular Physics
12. Laboratory-III
13. Thermal Physics
14. Many Body Theory
15. Experimental Techniques
16. Nuclear Physics (Phys./543d)
17. Laser Physics
18. High Energy Physics
19. Solid State Physics (Phy/543a)
20. Project Work

M.Phil/Ph.D.

1. Elementary Particle Physics (Phys/622)
2. Material Science (Phys/618)

Seminar/Conferences/Symposia/Extension Programmes
Organised : None
Attended :

Prof.Verman delivered an invited talk at the international Conference on Modern Spectroscopy organised at the Aligarh Muslim University, Aligarh from 27-31 Dec.1994 on Electron transfer in Paorphycins probed by time-Resolved Resonance Raman spectroscopy. He delivered a talk on Time-resolved Raman spectroscopy in the Physics Department of the cochin University of Science and Technology,Cochin on 20th Nov.1994.

Prof Verma on invitation participated in the Asian Academy Seminar on Molecular Science and Molecular Materials at the Indian Institute of Science.Bangalore from 22-26th Nov.1994,and also delivered a talk on laser Raman Spectroscopy in the UGC sponsored XI Refresher Course in Chemistry at the department of Chemistry,NEHU,shillong on 29th July 1994.

Dr. C.S.Shastry delivered four talk on theory of Nuclear reactions and Heavy collisions at Department of Physics Kurukshetra University,Kurukshetra Dec.23-27,1994. He visited Aligarh Muslim University.Department of Physics for collaborative research programme during Dec.28.1994 Jan. 8.1995.

Dr. P.Shukla gave a series of lectures in the Refresher Course in Physics held at dibrugarh University (June 27-30,1994),and gave a Keynote address for the session "Statistical Physics" in the Workshop on "Current Trends in Condensed Matter Physics"at the Saha Institute of Nuclear Physics Calcutta (Aug.9-10-1994) Dr.Shukla visited BARC, Bombay (Jan 6-31,1995) and TIFR Bombay (Feb.17,1995) for work related to on going DST project "Statistical Mechanis of Neural Network"

Dr.P.N.Pandita was an Indian National Science Academy visiting Fellow at the Tata Institute of Fundamental Research Bombay Sep.1-Dec.10,1994 and gave a Seminar on "Upper bound on the lightest Higgs Mass in super symmetric theories". He attended the workshop on "Indian participation in CMS experiment" at the TIFR,Bombay Nov.28-29,1994. Dr.Pandita was a visiting scientist Nordisk Institute of Theoretical Physics (NORDITA) Copenhagen,Jan.2-March 18,1995 gave a seminar on "Lightest Higgs Boson in supersymmetric Models"organised jointly by NORDITA and Niels Bohr Institute.

Dr.M.K.Parida was selected as the Theoretical Physics Seminar Circuit Speaker by the National Organising Committee for the year 1994-95 and delivered the following invited talks :

(a) "Uncertainties in non SUSY GUT prediction," TPSC lecture given at the Calcutta Centre at the Saha Institute of Nuclear Physics, Oct.6,1994.

(b) "Uncertainties in GUT predictions and vanishing corrections on intermediate scale "TPSC lecture given at the Madras Centre at the Indian Institute of Mathematical Sciences, Oct.27(1995). He also gave united talks on "Theorem on vanishing corrections on intermediate scale and precise predictions on neutrino masses" Invited talk given by Dr. M.K.Parida at the Institute of Physics, Bhubaneswar,Jan.25(1995), on "Precise predictions in grand unified theories" at the Indian Association for the Cultivation Science,Calcutta Jan.27(1995), and on "Unification of Fundamental Forces" at Ravenshaw College, Cuttack Jan.24(1995).

Dr.Y.S.Jain gave an invited talk on "A review on the laser Raman scattering studies of normal and superfluid 4He" in the workshop on advanced laser spectroscopy, IIT Kanpur (Feb.25-28,1995).Dr.P.K.Bajpai attended a symposium on "Spectra,structure and Dynamics" at IACS, Calcutta Nov. 28-30,1994.

Visiting Professor/Fellows :

Professor S.P.Mishra, Institute of Physics Bhubaneswar visited NEHU and spent a week under the DST project ofDr.M.K.Parida. He also delivered a colloquim "Can we see vacuum structure experimentally?"

Professor Amitava Roychoudhury visited as the DST nominee for JRF selection under the DST project of Dr.M.K.Parida and delivered the talk "Neutrino Masses and Oscillations". Dr

Dr. Sudhir Ranjan Jain from theoretical Physics Division BARC, Trombay visited shillong and gave a lecture "Non-linear Dynamics of cranking model and super deformed Nuclei" in Physics Department in Dec.1994.

PUBLICATION :

1. Shukla P. "Barkhausen noise and self organised Criticality" Proc. DAE SSP.SYMP.90 (1994)
2. Santra,L.Verma, A.L. etal "Raman spectroscopic study of Alanline-doped triglycien sulphate single crystals"Physics,Chem.Solid,55,405-411 (1994)
3. Choushury N.K. Saini, G.S.S. and Verma, A.L.,"Temperature dependent Axial ligation and photoreductions of Iron Protoporphyrin-IX Dimethyl ester chloride at low temperatures monitored by resonance Raman-Technique " Inorg.Chem. 34,346-349 (1994)
4. Susan P. Shastry C.S. and Gambhir,Y.K. "Salient festures of scattering amplitudes in intermediate energy nucleon Nucleus scattering,Phys Rev. C(in press)
5. Shastry C.S. and Nandi S. "the concept of time in Physic" Horizons of physics Vol II (Wiley eastern) in press.
6. Pandita P.N. "Approximate formulas for neutraline masses in the non minimal supersymmetric standard model" phys Rev.D50, 571-577 (1994)
7. Pandita, P.N. "Neutraline mass matrix in the non minimal supersymmetric standard model" Zeitschrift for physics C 63, 659-671 (1994)
8. Kynshi M.L. and Parida M.K. "Threshold effects on intermediate mass and proton lifetime predictions in SU (5) with split multiplets" phys Rev.D 49, 3711-3721 (1994)
9. Rani M. and Parida M.K. "Confronting CERN LEP data proton lifetime and small neutrino masses by threshold effect in SO (10) with SU(2) XU(1) XSU (4) intermediate breaking"
   L R C
   Phys Rev. D 49,3704-3710 (1994).
10. Lee,Dae-Guy. Mohapatra R.N.,Parida M.K. and Rani M."Prediction for proton life time in minimal non supersymmetric SO (10)grand unification:An update" Phys Rev.D51(1995) in press.
11. Dev S.and Parida M.k. "Low-Mass righthanded gauge bosons, new models of proton decay and other observable predictions in SU(8) XSU(6) and SU(16)" Phys Rev. D 51(1995) in press.
    L R
12. Parida M.K. "Threshold effects in SUSY and SUSY grand unified theories" Pramana (J.Phys),1995.
13. Susan P., Sahu B.,Jyrwa B.M. and Shastry C.S. "Pocket and barrier resonances in potential scattering and their application to heavy ion reactions" J.Phys(G) Nucl. Particle Phys.20, 1243-1256 (1994)
14. Buam E.M.L. and Jyrwa B.M. "Parametization of the optical model" DAE symposium on nuclear phys.37B,215-216(1994)
15. Bajpai P.K., Pal B. and Basu Paul, T.S. "Structure of some Arylazophenols and Arylazonaphthols in solid State : A resonance Raman Study" J. Raman spectrosc. 26 (1995) in press.

16. Baidai P.K. Pal, B and Basu Paul,T.S. "Structural characterization of some 8-quinolinol containing azo dyes in solid and solution state as probed by Resonance Raman FT-I R and Electronic spectroscopic techniques" J.Raman Spectrosc 26 (1995) in press.

17. Sahu, B and Shastry C.S. "Nucleus-Nucleus fusion in the presence of Break up" Proc. DAE Symp.on Nuclear Physics 37 B, 185-186 (1994)

Thrust Areas of research. Laser physics/Spectroscopy Nuclear Physics, Solid State Physics, Particle Physics/High Energy Physics.

Research Programmes/Research Project undertaken :

1. "Unification of fundamental forces : New predictions and pheno-menology" Continuing research project sponsorted by DST(DR.M.K.Parida).

2. "Unification constraints and gauge symmetries in super symmetric composite models Joint collaboration with Institute of Physics Bhubaneswar and University of Maryland.USA (Dr.M.K.Parida).

3. "New Mechanism for neutrino masses in SUSY and non SUSY grand unified theories" (Dr.M.K.Parida)

4. Collaborative research work at the Institute of Physics Bhubaneswar in collaboration with Prof. Jogesh C. Pati for the period 22nd Dec. 1994-Jan. 25.1995.

5. Research project entitled "Investigation for understanding the Mechanisms inherent by the Biological clocks" DAE project (Dr.P.Nongkynrih)

6. Research project entitled "Establishment of critical limits of micronutrients of rice soils and plant in Meghalaya" DAE project (Dr. P. Nongkynrih)

7. The surface contribution to thermodynamic properties of solids has been formulated in terms of local density of States. The analytic EAM potentials derived earlier are used to discuss the lattice dynamics of fcc metals. (Dr.P.N.Ram)

8. "Defect in Metallic solids" DST project (Dr.P.N.Ram).

9. The major research projects: Advanced materials: super conductors, semiconductors and Ferroelectrics studied by Laser Raman spectroscopy" funded by Indo-French centre for the promotion of advanced research was completed by Prof. A.L.Verma.

10. A new major research project on "Laser induced photophysical and photochemical studies on some porphyrins probed by Resonance Raman Technique" has been approved by DST,New Delhi under the supervision of Prof.A.L.Verma.

11. The research programme on low energy supersymmetry continued during the year with substantial progress made in the investigation on the Higgs and neutriline sector of the minimal and non-minimal models. studies of the general models was also undertaken during the current year and significant results in respect of the mass bounds for the lightest neutralino were obtained (Dr. P.N.Pandita).

12. The DST sponsored research project "Low energy supersymmetry" under the supervision of Dr.P.N.Pandita was extended for a period of one year and continued to make significant progress. The results obtained under the project were presented both nationally and internationally in seminars. This includes seminars given at the Tata Institute of Fundamental Research,Bombay,Research Institute for Theoretical Physics University of Helsinki,Findland and Physics Department,at the University of Bergen,Norway(Dr.P.N.Pandita)

13. The DAE sponsored research project "supersymmetry with broken R-parity" under the supervision of Dr.P.N.Pandita is being completed (Dr.P.N.Pandita).

14. The vibrational relaxation studies have been carried out in solution using laser Raman scattering technique. The non-coincidence effect has been studied as function of solvent concentration.New insight has been obtained in the behavior of molecular liquids when dissolved in solvents of varying dielectric constant. The theory of continuon does not seem to fit in acetophenone and substituted acetophenones (Dr.Kamal Kumar)

15. Research Project "Theoretical Investigation of the relativistic nucleon-nucleus scattering" was completed in March 1995(Dr.C.S.Shastry)

16. The interpretation of the dielectric relaxation data in substituted schiff's bases is continuing (Dr.Kamal Kumar)

17. "Vibrational and dielectric studies of microscopic mechanism of structural phase transitions and role of doopants in some ferroelectric crystals" DST project under consideration(Dr.P.K.Bajpai)

Any other remarks :

Prof. A.L.Verma continued as a member of the DST programme advisory committee on "Laser and optics" up to the end of 1994. Prof. Verma visited the University of Cochin and Madras In Nov.1994. Dr.P.Nongkynrih visited BARC,Trombay, Bombay and Madurai Kamraj University , Madurai from 3.2.1995-23.2.1995 in connection with her research work. M.L.Kynshi has been awarded Ph.D. degree on "Investigation on some new predictions in grand unified theories" under the

guidance of Dr.M.K.Parida.

J.A.Blah has submitted the Ph.D thesis "Vibrational spectra of solids induced by defects in bulk and at surface" under the supervision of Dr. P.N.Ram.

4. CENTRE FOR APPLIED STATISTICS

The Centre for Applied Statistics was established in 1984. It's main objective is to conduct teaching,research and training programmes in the field of Applied Statistics.

Head : Dr. M.K. Das.

Faculty:

Name	Designation	Specialisation
(i) Dr. M.K.Das	Reader & Head	Bayesian Inference and Quality Control.
(ii) Dr. G.Das	Sr. Lecturer	Sample Survey
(iii) Mr. B.K.Gupta	Sr.Lecturer	Sample Survey,Design of Experiment & Statistical Genetics in professional Statistican Certificate Course in Agril. I.A.S.R.I. New Delhi.

Courses conducted :

Two Semester Certificate Courses in Statistics.

Extension Lectures :

1. Dr.(Mrs) G.Das - Lectured on biometrics to 4th Semester M.Sc. (Zoology) students.
   - Lectured in Biostatistics to UGC Refresher Course (NEHU) in Zoology.
   - Lectured in Mathematics for Economists and Business Statistics Sourses, Assam University. Silchar.
2. Dr.Mr. B.K.Gupta - Lectured on Biometrics in IInd Semester M.Sc. (Zoology) course, NEHU.

Seminar/Symposis/Workshop

(i) Dr.(Mrs) G.Das participated in "Winter School on Sample Survey" organised by Indian Statistical Institute.Calcutta during March 6-16-,1995.

(ii) Mr. B.K.Gupta attended workshop "Regression Methodology in Statistics at ISI Calcutta from 13-22 Feb.'95.

(iii) Mr. B.K.Gupta attended a 'School on Sample Survey' at ISI, Calcutta from 6th to 16th March,1995.

Publication :

(i) Das,G. and Bez,K. : Preliminary Test Estimators in Double Sampling with two Auxiliary Variables, communications in Statistics : Theory and Methods, Volume 24,1995 (Marcel Dekker).

(ii) B.K.Gupta & T.J.Rao : 'Stratified PPS Sampling and Allocation of Sample Size', Tech.Report No. 6/94,Stat-Math-Division ISI, Calcutta.

Research Programme :

Dr.(Mrs).G.Das presently working on

(i) Preliminary test estimators in double sampling and
(ii) Simulation Studies.

5. CENTRE FOR SCIENCE EDUCATION

The Centre for Science Education is a free choice environment, innovatively simulated, where joy of learning is experienced through exploring science without any regi - mentation, examination or award of Certificate diploma or degree. Centre encourages multistage multiple free interaction so as to facilitate learning through self-prompted motivation and recyclic enquiry.

It is Committed to :

- : Develop scientific temper and spirit of enquiry.
- : Preserve the rich heritage of the nation's composite culture.
- : Identify & cultivate creative talent amongst the Young generations.
- : To take the message of Science & Technology to masses and rural areas in particular.

NAME OF THE HEAD : DR. MAN MOHAN SINGH.

MEETINGS : Advisory Committee - 24th November, 1994.

COURSES CONDUCTED :-

a) NON FORMAL COURSE ON COMPUTER APPRECIATION. (2/1/2)months this was aimed at General community enrichment and awareness, Demystifying of Computers and to make them comfortable with PC.

The no.of Seats was 75 each per session.113 partipants were admitted in both terms.

The participants comprised - 61 Males, 52 Females; 4 Scheduled Castes, 75 Scheduled Tribes and 34 others; 17 from Schools, 68 from Colleges; 8 from Post-Graduates Departments or University and 13 non-students or working individuals including house-wives and drop-outs.

b) COURSE ON BASIC PROGRAMMING (14 Weeks)

The No. of seats was 20 in the beginning; 12 as target number after second screening.236 applicants registered for admission of which 142 were given a Selection Test. Finally 20 participants were selected & admitted. The group comprised 13 Males, 7 Females; 1 Schedule Castes, 9 Scheduled Tribe and 10 Others; 6 from Schools, 12 from Colleges and 2 working individuals or non-students including drop-outs.

c) COURSE ON USE OF dBASE III PLUS (12 Weeks)

18 were admitted to the group comprised 10 Males, 8 Females;10 Scheduled Tribes and 8 Others; 5 from Colleges, 1 from Post-Graduate Department of the University, 6 working individual, 3 house-wives and 3 doing nothing (unemployed).

d) COURSE ON AMATEUR RADIO (12 Weeks)

The aimed was to involve motivated and gifted students in a creative semi-professional programme and enable them to make best use of their leisure time after examinations.

The Course content was as that prescribed by Ministry of Communications and as approved by Advisory Committee.

Duration : 12 Weeks.

No. of sessions : 120 sessions.

This year 21 students applied for the admission, 17 were given the admission test and 10 students were admitted.

The participation comprised of 7 males, 3 females; 2 Schedule Tribe and 8 Others; 4 from Colleges, 4 from Schools and 2 Working Indiuals.

A SPECIAL PROGRAMME.

Special training on Amateur Radio for the participants from Nagaland was also organised at the request of the Department of Science and Technology, Govt. or Nagaland.

During second programme 33 applicants took admission for Grade-I examination, of which 32 were males and 1 female; 11 Scheduled Tribes and 22 Others; 5 from Colleges, 17 Research Students from the University, 5 working Individuals, 3 Lecturers 2 Professors and 1 House.wife.

Efforts are consistently made to begin a professional course on COP (Certificate of Proficiency on Wireless Communications).

COURSES ON REMEDIAL TEACHING ON BOTANY, CHEMISTRY, MATHEMATICS, PHYSICS & ZOOLOGY).

The Course content is as prescribed for PU IInd year and PU Ist year.

The duration was 24 weeks for IInd Year students, 16 weeks for Ist year students.

The Clientele is for PU Ist Year & IInd year Tribal

students only.

55 students were admitted in P.U. Ist Year in two sections and 12 students were admitted in the IInd year of Remedial teaching.Over all Course was founded to be very useful and interesting.

RADIO OFFICER'S PROGRAMME

The new programme under plan development has been discussed at various forums including Advisory Committee of the Centre.

ZERO LECTURE CAREER IMPROVEMENT & SCHOOL EFFECTIVENESS PROGRAMME FOR WORKING TEACHERS.

The programme is under plan discussion for design and development.This programme is conceived to motivate working teachers to begin working for improvement of school effectiveness and thereby also earn academic reward by means of University recognition.

The plan envisages creative involvement of working teachers in their own School environment inorder to experimentally research the content methodology, media, learner's difficulties and most appropriate evaluation techniques by way of which overall improvement of school learning environment takes place.

OTHER ACTIVITIES

1. STREAM I = POPULARISATION OF SCIENCE & MATHEMATICS

a) DISTRICT SCIENCE EXHIBITION-CUM-ENVIRONMENT FAIR

Participated in Nongpoh, Ri-Bhoi District by way of exhibiting discovery-cum-participatory exhibits, display of Low Cost Teaching Aids and experiments exposing interesting Science explorations.

b) State Exhibition on Science = Shillong.

The Centre organised Discovery-Cum-Participatory exhibition and Easy to do experiments demonstration where the Public interaction was 1500 in the Discovery-Cum-Participatory Exhibition and 450 in the Easy to do and understand Experiments

c) Manipur Science Fair

On the invitation of Manipur Association of Science & Society and Department of Science Technology & Environment,

Govt.of Manipur organised five days Science Fair at Imphal State Museum.

On an average 1500 participants participated every day except Band day when only 672 participants took part.

d) Science Expo = DIMAPUR

Two days Science Exposition of discovery exercises and easy to do experiments was organised at Kelankaba M.Science College on the special request of the Principal and Management Committee of the Kelankaba M. Science College, Dimapur on 1st and 2nd October, 1994.

Hundreds of students and community from nearby localities participated in the programme.

e) Village level Mobilisation Camps

Centre continued village mobilisation programme initiated last year in order to nucleate village level active groups, clubs and forums.The programme had following inputs :

Academic Enrichment & Interaction

Science-Cum-Skill Development

Organisation (5) School level activists meeting
Community workers meeting

The camps were organised at MAWKYRWAT, LAITLUM, MARBISU and MAIRANG.

f) ONGOING ACTIVITIES

School / Other visits

: Schools Visits - 6 Schools - 350 participants
: Other groups and Organisations - 4 groups - 150 participants
: Visits to Schools - 5 Schools - 1500 participants

Discovery Participatory Exhibits

After Bi-Decennial Anniversary Celebration, Centre could establish a Discovery-cum-Participatory Exhibition room Approximately 3500 participants took the benefit of the discovery room.

g) MASS ACTION FOR NATIONAL REGENERATION BHARAT JANA GYAN

VIGYAN JATHA =

Centre for Science Education availed the opportunity of joining hands with Mass Action for National Regeneration - Bharat Jana Gyan Vigyan Jatha and organised numerous activities during last year.

AWARENESS PROGRAMMES

a) Hand Outs and Leaflets

on Amateur Radio, Computer Courses, Remedial Teaching, Interesting Exploration and School Programmes.

b) Exhibitions

On Portable Water-Safe for Health organised at various places.Another exhibition on Floods & Droughts as well as Low-Cost Housing was acquired and arranged at various place.

c) Popular Lectures (organised by Centre)

A popular lecture on "Wonders of Computing" by Prof. P.Bhattacharya of IIT POWAI, BOMBAY.

On "Learning Knowledge Representation and Nural Net-working".

On "How to make learning of Mathematics interesting" was delivered by Prof. A.R.Rao, Consultant, Vikram A. Sarabhai Community Science Centre, Ahmedabad to the College and University students.

Demonstration-cum-interactive presentation on "Play way method of learning Mathematics" was delivered by Prof. A.R.Rao

He also gave a talk on "Innovations in teaching of

Mathematics "

Mr. Ikesh Pal Singh, Executive Director of Excel Computers, New Delhi spoke to School and College students on

: Fascination on working with windows.

: Effective presentations by Use of Harvard Graphics.

: Versatility in Graphic Designs through Coral Draw.

RESEARCH AND DEVELOPMENT PROGRAMMES

The following three programmes continued this year too

a) Design & Development of Teaching & Learning Aids
b) Development of Computer Education Programme for School going Students.
c) Try out of Computer Aided Insturction for CW Training

EXTENSION LECTURES DELIVRED :- At all India Radio on "Programme on Human Evolution - Its Impact"

A lecture-cum-demonstration session on "Evaluation in Context of Remedial Teaching" NCERT to the teacher participants of various States organised by REC/NCERT.

A lecture-cum-interactive session on the "Role of Diagnostic Testing in Classroom learning" to the teacher participants of Tripura, Meghalaya and Mizoram organised by REC/NCERT at PGT College

A talk on "Science Journalism and Sciencacy" at NEC to the participants of NE States during 5 days Workshop On Scientific Journalism jointly organised by NEC and NCSTC, New Delhi

SEMINAR /SYMPOSIA / WORKSHOP:

a) DR. MAN MOHAN SINGH attended the following Conventions and Workshops organised by Central Executive of BJGVJ/MANAR, NEW DELHI supported by National Council for Science & Technology Communication, Dept.of Science & Technology, Govt. of India.New Delni and chaired panel discussion during some sessions.

: MANAR DISTRIC CONVENTION at MAWKYRWAT on 14th May.

: National Convention, Manthan Sammelan at NEW DELHI from 22nd May to 26th May.

: National Consultation on MANAR PERSPECTIVE at HYDERABAD from 3rd to 5th June.

: National Workshop on Universalisation of Elementary

Education at NCERT, CIET, NEW DELHI from 28th February to 2nd March.

: National Conference on MANAR PERSPECTIVE and BJGVJ reconstitution at ITARSI from 3rd to 5 June.

Prof. Man Mohan Singh also was invited to attend 9th ICASE Asian Symposium on Science Education organised by International Council of Association for Science Education and IPST, THAILAND from 6th to 10th December.

Was invited to attend two days Workshop On Approaches to Environment Education for children from 25th to 26th July organised by Centre for Environment Education, North Eastern Regional Cell at Guwahati.

b) Seminars and Regional Consultation organised

: Regional Organising Council Consultation at Assam Science and Technology Council on 12th April. Seven States participated.

: Regional Organising Council Consultation at Centre for Science Education on 30th April. Seven States participated.

c) Centre participated in:-

: Workshop On Eco-Development at Wild Grass organised by Centre for Environment Education, Guwahati. Two participants were deputed.

: Workshop on Sustainable Agriculture Development at Ranchi organised by State Organising Council, Bihar in Collaboration with BJGVJ/MANAR,NEW DELHI. Thre participants were deputed.

: Workshop on Appropriate Technology and its Socio-Political significance at IIT, DELHI. Two participants were deputed.

PUBLICATIONS

A write-up on "Role of Diagnostic Testing in Improvement of Class room Learning" has been given, accepted and published by NCERT in their Workshop-cum-Training report.

ANY OTHER REMARKS

a) All India Radio produced on audio documentary on Computer Lib and Information Technology involving Prof. B.Bhattacharya of IIT at the Centre.

b) Doordarshan Kendra Shillong also produced an educational documentary on Fascination of Working with Computers at the Centre for Science education.

c) Centre initiated a community forum by the name of 'IA TEILANG in order to support Science activities related to community.

MEMBERSHIP ON PROFESSIONAL BODIES & ACADEMIC COMMITTEES

a) Dr. Man Mohan Singh has been requested to act as a member of Advisory Committee of Regional Science Centre, NCSM, Guwahati for a period of two years.

b) Dr. Man Mohan Singh is elected as an Executive member to Volunteer Health Association of Meghalaya.

c) Centre for Science Education has been inducted as institutional member to National Council of Science & Technology Communication Network.