

Report of Basic Research- Development of Science Departments out of BSR grants

Botany Department

Infrastructural Development

S. No.	Activity
1	Advanced Botany lab. was set up with instruments like Orbital Incubator Shaker, UV VIS- spectrophotometer, Muffle furnace, Kent Excel RO with extrafilter, Deep freezer
2	A smart class room was set up in Botany Department containing Interactive panel, DLP Projector, visualizer & C.P.U.

Publications in session 2011-12

Dr. Sushila Dabas

Research Papers in Journals/ Proceeding of Conferences -Published/accepted/communicated		
1	Effect of Industrial polluted soils on seed germination of green vegetables (<i>Spinacea oleracea</i>) published in proceeding of National conference on Environmental & Health issues: In a changing climatic scenario which was held at M.D.U., Rohtak	
Research papers presented/accepted in conferences/ Seminars		
1	Continous revolution in Biotechnology- A boon in forensic investigation	Presented in National Conference held at M.D.U., Rohtak on 16-18 th April, 2010.
2	Social, Economic & cultural girl child	Presented in National Seminar on Eliminating Daughters: Paradox of Development in India held on Dec. 15, 2010.
3	Presented a paper in National Conference on Multidisciplinary Approach in Frontier areas of Environmental Science & Engineering held at G.J. University of Science and Technology in 2011	
Seminar/ workshop/ conferences Attended		
1	A National seminar on Recent Advancements in Application of Genetics organized by Department of Genetics at M.D.U., Rohtak on March 20, 2012	
2	A National seminar organized by Department of Microbiology at M.D.U., Rohtak on March 24, 2012.	

Dr. Joginder Dahiya

Books Published/ To be published		
1	<i>Introduction to Biotechnology.</i> Singh, J. and Yash Pal (2005)	Published by Arya Publishing Company, New Delhi
2	<i>APC Secondary Biology for Us, Class IX</i> Yash Pal and Joginder Singh. 2010 (3 rd Ed.)	Published by Arya Publishing Company, New Delhi
3	<i>APC Secondary Biology for Us, Class X</i> Yash Pal and Joginder Singh. 2010 (3 rd Ed.)	Published by Arya Publishing Company, New Delhi
4	<i>Manual on CCE of Biology, Class IX</i> Singh, J.	To be published by Arya Publishing Company, New Delhi
5	<i>Manual on CCE of Biology, Class X</i>	To be published by Arya Publishing

	Singh, J.	Company, New Delhi
Research Papers in Journals/ Proceedings of Conferences -Published/accepted/communicated		
1	Singh J , Suhag M, Seema, Kumar A and Dhankar R. Production of Bioethanol from Lignocellulosic Biomass: An Overview. Reviewed Proceedings of National Seminar on Internet: Applications in Research, 87-90 (2011), ISBN: 978-81-920945-1-9.	
2	Suhag M, Devi S, Dhaka A and Singh J . Cellulolytic degradation of lignocellulosic biomass for bioethanol production: A review, Energy-Water-Waste Nexus For Environmental Management, Narosa Publishing House 176-180 (2012), ISBN: 978-81-8487-206-4	
3	Devi S, Suhag M, Dhaka A, and Singh J . Acid and Alkaline Hydrolysis Technologies for Bioethanol Production: An Overview (Abstract). International Conference on Mycology and Plant Pathology, Biotechnological Approaches (ICMPB 27- 29 Feb., 2012) BHU (Varanasi).	
4	Devi S, Suhag M, Dhaka A, Dhankar R and Singh J . Biochemical Conversion Process of Producing Bioethanol from Lignocellulosic Biomass. <i>International Journal of Microbial Resource Technology</i> , Vol. 1, No. 1, 28-32 (2012).	
Seminars/ Workshops/ Conferences Attended		
1	National Seminar on "Environ. And Health Issues: In a Changing Climatic Scenario" organised by Department of Env. Sc., MD University, Rohtak on October 14-15, 2010.	
2	India-Japan Seminar on Nanomaterials for Diagnostics and Therapeutics organised by Department of Biochemistry, MD University, Rohtak on October 30, 2010.	
3	National Conference on "Biodiversity: Challenges and Opportunities" organised by Department of Botany, MD University, Rohtak on Feb. 18-19, 2011.	
4	National Seminar on "Internet: Application in Research" organised by Department of Zoology, MD University, Rohtak on March 26, 2011.	
5	National Seminar on Microbes and Resource Management organised by AMI-Rohtak Unit on October 22, 2011.	
6	State Level Workshop on "Process of Accreditation" organised by BPSM Vishwavidyalaya, Khanpur Kalan, Sonapat on 18 th Nov., 2011.	
7	National Seminar on "Sir Chhotu Ram: Life and Ideology" organised by Centre for Haryana Studies & Department of Public Administration, MD University, Rohtak on Dec. 10, 2011.	
8	National Workshop on "Current Perspectives in Advance Material Science" organised by PNRS Govt. College, Rohtak from Feb. 8-9, 2012.	
9	National Seminar on "Challenges in Combating Diseases: Cause to Cure" organized by Department of Zoology, MD University, Rohtak on March 23, 2012.	
10	National Seminar on "Microbes in Human Welfare" organized by Department of Microbiology, MD University, Rohtak and AMI, Rohtak Unit on March 24, 2012.	
11	National Workshop on "Microbial Diversity: Exploration and Perspectives" organized by Department of Env. Sc., MD University, Rohtak from 3 rd May 2012 to 12 th May 2012.	
Research Project completed / undergoing		
1	"BIOETHANOL PRODUCTION FROM LIGNOCELLULOSIC BIOMASS"	MAJOR RESEARCH PROJECT GRANTED by UNIVERSITY GRANTS COMMISSION, NEW DELHI OF RS. 11.39 LACS IS GOING ON <i>w.e.f.</i> MAY 01, 2009.

RESEARCH GUIDANCE for Ph.D. Degree	
1	DEVI, SEEMA. <i>ENZYMATIC SACCHARIFICATION AND FERMENTATION OF LIGNOCELLULOSIC BIOMASS FOR BIOETHANOL PRODUCTION</i> . Regn. No. 0950102344 from Singhania University, Pachari Beri, Rajasthan.
2	SUHAG, MEENAKSHI. <i>BIOCONVERSION OF CELLULOSIC BIOMASS OF Musa paradisiaca L. INTO BIOETHANOL</i> . Regn. No. 1050102354 from Singhania University, Pachari Beri, Rajasthan.
MEMBERSHIP	
Life-Member of Association of Microbiologists of India since Nov., 2010.	
Member of UG Board of Studies, Department of Botany, MD University, Rohtak since May, 2011.	
OTHER ACHIEVEMENTS	
Completed LLB. (Hons.) in 2011	

Chemistry Department

Department of Chemistry has the distinction of being one of the founder departments of Jat College since its inception.

- 16 full-time faculty members that include 7 Associate professors, 3 Assistant professor (Budgeted) and 6 Assistant professor (SFS).
- Qualified faculty members as per the latest guidelines of the UGC
- All the faculty members are actively engaged in teaching and research
- Faculty is highly competent to handle the divergent specialized areas
- Highly specialized faculty for imparting soft skills for personal and professional development of the students

Infrastructural Development

S. No.	Activity
1	Chemicals, glass instruments and the apparatus were purchased in the Dept. of Chemistry Dated: 25/02/2012
2	One H.P. Printer-Laser jet 1005 was purchased Dated: 28/07/2011
3	Departmental Library is set-up in the light of specific need/ syllabus based books for the students (UG & PG) and teachers
4	New computer aided technology based, a Smart Class room has been set-up in the Dept. of Chemistry, which is a great value of teaching in modern education
5.	Sound system for the smart class room of chemistry dept. was purchased
6.	One Projector for the smart class room
7.	Two inverters (one for the smart class room other for chemistry Labs.)
8.	One Desktop & processor in chemistry Labs.
9.	pH / potentiometer electrode, conductivity cells etc. were purchased Dated : 08/09/2011

Important Ratios

Teacher-student ration	1: 10
Demand ration (no. of seats: no of the applications)	1:4

Ph.D. completed/ submitted/ enrolled

S. No.	Faculty Name	University/ Institution	Status
1	Dr. Kapoor Singh	Maharshi Dayanand University, Rohtak	Awarded degree in the convocation held on 9 th April 2012
2	Dr. Dinesh Dalal	Maharshi Dayanand University, Rohtak	Awarded degree in the convocation held on 9 th April 2012
3	Dr. Sonia Verma	Maharshi Dayanand University, Rohtak	Awarded degree in the convocation held on 9 th April 2012
4	Dr. Rajesh Siwach	Maharshi Dayanand University, Rohtak	Awarded degree in the convocation held on 9 th April 2012
5	Dr. Sunil Jangra	Maharshi Dayanand University, Rohtak	Awarded degree in the convocation held on 9 th April 2012
6	Sh. Anand Kumar	Maharshi Dayanand University, Rohtak	Registered in the eleventh period programme under FIP scheme of UGC
7	Sh. Raman Kumar	DCRUST, Murthal, Sonapat	Registered with Registration No. 09181009

Publications in session 2011-12

Dr. Amita Khokhar

Books		
1	“Simplified Environmental Science” for under graduate classes.	published by R Chand & Co., New Delhi
2	“Prayavaran Adhayan” for under graduate classes	published by R Chand & Co., New Delhi
Research papers presented/accepted in conferences/ Seminars		
1	Kinetics and thermodynamic study of the hydrolysis of 4-nitrophenylphosphate diesters in acid media”	Presented in the 6 th National Conference on thermodynamics of Chemical and Biological Systems in the dept. of Chemistry, M.D.U., Rohtak from 02-11-2011 to 04-11-2011.
Seminar/ workshop/ conferences Attended		
1	International Seminar was attended on the topic “Chemistry-our life, our future” on 12-03-2012 in G.V.M. Girls College, Sonapat	
Member of Advisory and editorial board of Lab to Land international journal (2011), ISSN-NO-975-282X.		

Dr. Kapoor Singh

Research Papers in Journals/ Proceeding of Conferences -Published/accepted/communicated		
1	Synthesis & characterization of 5,7-dimethyl-8-hydroxy-quinoline and 2-(2-pyridal) benzimidazole complex of Zinc (II). Journal of OPTOMAT, Article No. 4716	
2	White organic emitting diodes based on DCM dye sandwiched in 2-methyl-8-hydroxy quinolatolithium Journal of Luminescence, 130 (2010) 1516-1520.	
3	Electroluminescent characteristics of bis(5-chloro-8-hydroxyquinolinato) Zinc (II) Indian Journal of Chem. 49A (2010) 448-451.	
Research papers presented/accepted in conferences/ Seminars		
1	Synthesis & study of optical properties of Eu(III) complex with β -diketone as primary ligand & TPPO (Triphenylphosphine oxide) as secondary ligand	Presented in the National Symposium for Materials Research Scholars, MR09 at IIT Bombay 8 th May 2009.
2	Synthesis and optoelectronic characterization of tris(5,7-dimethyl-8-hydroxyquinolato) aluminium (III)	Presented in the 97 th Indian Science Congress at Thiruvananthapuram, Karnataka, 3-7 Jan, 2010
3	Colour tuning of (8-Hydroxyquinolinato) aluminium (III) by electron donating group	Presented in XV th International Conference on semiconductor device at Jamia Millia University, New Delhi, 15 th Dec. 2009.

Dr. Renu Malik

Research papers presented/accepted in conferences/ Seminars		
1	Molecular interactions of ternary Non-electrolyte mixtures at 298.15K	Presented in 6 th National conference on thermodynamics of chemical and biological system (NCTCBS-2011) held at Department of chemistry, M. D. U. Rohtak on 2-4 Nov. 2011.
2	Excess Molar volumes, V^E of binary mixtures containing tribromo methane (i) + n-hexane or n-heptane (j)	Presented in National conference on Global challenges-role of science and technology in giving their solutions (GCRSTS-2012) held at The Technological Institute of Textile and science on March 3-4, 2012.
Seminar/ workshop/ conferences Attended		
1	National Seminar was attended on the topic "Chemistry- Our life, Our future" on 12-03-2012 in G.V.M. Girls College, Sonapat.	
2	Attended Two day National workshop on current prespective in Advance Material Science organised by Pt. N.R.S. Govt. College, Rohtak on 8-9 th Feb, 2012	

Dr. Anil Kumar

Research papers presented/accepted in conferences/ Seminars		
1	Synthesis of acylals under green chemistry	Presented in 6 th National conference on thermodynamics of chemical and biological system (NCTCBS-2011) held at Department of chemistry, M. D. U. Rohtak on 2-4 Nov. 2011.

Seminar/ workshop/ conferences Attended	
1	Attended one day National Workshop on “Recent Trends in Chemistry-2011”. Department of Chemistry, DCRUST, Murthal (Sonipat).
2	Attended Two day National workshop on current prespective in Advance Material Science organised by Pt. N.R.S. Govt. College, Rohtak on 8-9 th Feb, 2012
3	Attended a National Seminar on Water Resource Management sponsored by DHE Haryana held at B.P.S. M.V., Khanpur

Dr. Jaibir Singh Yadav (SFS)

Research Papers in Journals/ Proceeding of Conferences -Published/accepted/communicated		
S.No.	Description of Manuscript	Impact Factor
1	Physicochemical Properties of Jatropha Curcas Biodiesel + Diesel Fuel No.2 Binary Mixture at $T=(288.15 \text{ to } 308.15\text{K})$ and Atmospheric Pressure Satish Kumar ^a , J. S.Yadav ^b , V.K. Sharma ^b , Wonsub Lim ^a , Jae Hyun Cho ^a , Junghwan Kim ^a and Il Moon ^{a*} . <i>J. Chem. Eng. Data</i> 56 (3) (2011) 497-501	2.089
2	Thermodynamic and topological investigations of molecular interactions in binary and ternary mixtures containing 1-methyl pyrrolidin-2-one at 308.15 K Yameeka ^a , J.S. Yadav ^b , Dimple ^c and V.K. Sharma ^{a*} . <i>J. Chem. Thermodyn.</i> 43 (2011) 737-749	2.794
3	Excess molar volumes of ternary liquid mixtures composed of 1, 4-dioxane, <i>o</i> -toluidine, and aromatic hydrocarbon at temperature of 308.15 K Sunil K. Jangra ^a , Neeti Saini ^a , J.S. Yadav ^b , R.K. Siwach ^a , Dimple Sharma ^c and V.K. Sharma ^a . <i>J. Mol. Liquids</i> 158 (2011) 192-196	1.649
4	Thermodynamic studies of molecular interactions in mixtures of <i>o</i> -toulidine with pyridine and picolines: Excess molar volumes, excess molar enthalpies and excess isentropic compressibilities Neeti, Jaibir S. Yadav [#] , Sunil K. Jangra, Dimple and V. K. Sharma, <i>J. Chem. Thermodyn.</i> 43 (2011) 782-795	2.794
5	Topological investigations of excess molar volumes and excess isentropic compressibilities of ternary mixtures containing 1-methyl pyrrolidin-2-one at 308.15 K Yameeka ^a , J. S. Yadav ^b , Dimple ^c , and V. K. Sharma ^{a*} . <i>J. Mol. Liquids</i> 159 (2011) 230–235	1.649
6	Thermodynamic properties of binary mixtures of tetrahydropyran with pyridine and isomeric picolines: Excess molar volumes, excess molar enthalpies and excess isentropic compressibilities Neeti ^a , Sunil K. Jangra ^a , J. S. Yadav ^b , Dimple ^c and V. K. Sharma ^{a*} . <i>Thermochim. Acta</i> 518 (2011) 13-26	1.899
7	Topological and thermodynamical investigations of ternary mixtures containing cyclic ether: Excess molar volumes Sunil K. Jangra, J. S. Yadav , Neeti, Dimple and V.K. Sharma [*] . <i>J. Solution Chem.</i> 40 (2011) 1055-1066	1.335
8	Thermodynamic investigations of ternary <i>o</i> -toluidine + tetrahydropyran + N,N-dimethyl formamide mixture and its binaries at 298.15,303.15and 308.15K Neeti, Jaibir S. Yadav [#] , Sunil K. Jangra, Dimple and V. K. Sharma [*] , <i>J. Mol. Liquids</i> 163 (2011) 36-45	1.649

9	Topological and thermodynamic investigations of ternary mixtures containing cyclic ether: Excess molar enthalpies Sunil K. Jangra, Jaibir S. Yadav [#] , Neeti, Dimple ^{##} and V. K. Sharma*. <i>J. Mol. Liquids</i> 162 (2011) 122-128	1. 649
10	Topological investigations of molecular interactions of binary and ternary mixtures containing tetrahydropyran, <i>o</i> -toluidine and N-methyl formamide Neeti ^a , J. S. Yadav ^b , Sunil K. Jangra ^a , Dimple ^c and V. K. Sharma ^{a*} <i>Thermochim. Acta</i> 524 (2011) 92-103.	1.899
11	Thermodynamic study of molecular ternary mixtures containing 1-methyl pyrrolidin-2-one, propan-2-ol and benzene or methyl benzene or cyclohexane: Yameeka, Jaibir S. Yadav , Dimple and V. K. Sharma* <i>J. Solution Chem.</i> 41 (2012) 1769-1783.	1.335
12	Topological and Thermodynamic studies for binary mixtures of 1, 4-Dioxane with anilines at 308.15 K V. K. Sharma*, Sunil K. Jangra, Jaibir S. Yadav [§] , Neeti, and Dimple [#] . <i>J. Solution Chem.</i> 41 (2012) 1563-1581.	1.335
13	Excess Molar Enthalpies for Binary and Ternary Mixtures containing Cyclic Ether and Aromatic Hydrocarbons Sunil K Jangra ^a , Jaibir S Yadav ^b , Neeti Saini ^a , Dimple Sharma ^c and Vinod K Sharma ^{a*} . <i>Thermochim. Acta</i> 530, 25-31, 2012.	1.899
14	Liquid densities and speed of sound for binary blends of {Jatropha biodiesel + (C ₂ -C ₃) alkanol} at T = (288 to 308.15) K and atmospheric pressure Satish Kumar, J. S. Yadav , V.K. Sharma, IL Moon <i>J. Solution Chem.</i> (Commun) 2011	1.335
15	Topological investigations of thermodynamic properties of 1-methyl pyrrolidin-2-one with water and propanols Yameeka, Dimple, Jaibir S. Yadav , and V. K. Sharma*. <i>Thermochim. Acta</i> (commun.) 2010 Ms. Ref. No.: TCA-D-10-00513R2	1. 899
16	Excess molar volumes, excess molar enthalpies and excess isentropic compressibilities of binary mixtures containing N-methyl-2-pyrrolidone and isomeric xylenes at 308.15 K Yameeka ^a , J. S. Yadav ^b , Dimple ^c , and V. K. Sharma ^{a*} <i>J. Mol. Liquids</i> (commun)2011	1.649
Research papers presented/accepted in conferences/ Seminars		
1	Excess molar enthalpies for ternary mixtures containing cyclic ether, <i>o</i> -toluidine and aromatic hydrocarbon	Presented in the National Symposium for Materials Research Scholars, MR09 at IIT Bombay 8 th May 2009.
2	Thermodynamic properties of liquid of molecular ternary mixtures containing NMP, propan-2-ol and benzene or methyl benzene or cyclohexane : Excess molar volumes	presented National seminar on Environmental Challenges: Sustainable Development held at Department of Environment Sciences, M.D. University, Rohtak on 29-30 March, 2011.
Seminar/ workshop/ conferences Attended		
1	Workshop on “Recent Trends in Nanotechnology” held at Department of Engineering and Technology, Maharshi Dayanand University, Rohtak	

2	Patent Awareness workshop organized by PIC, Hisar held at Center for Research & Application in Plant Tissue Culture (Haryana State Council for Science & Technology, Department of Science & Technology, Govt. of Haryana) New Campus H.A.U., Hisar-125004
3	Workshop on “Applications of SPSS” held at Department of Engineering and Technology, Maharshi Dayanand University, Rohtak

Dr. Sonia Verma

Research Papers in Journals/ Proceeding of Conferences -Published/accepted/communicated	
1	Trace metal concentration in different Indian tobacco products and related health implications (Published) S. Verma , S. Yadav, I. Singh*, Food and Chemical Toxicology, 48 (2010) 2291–2297.
2	Spectrophotometric Determination of Silver with 1-(2-Quinolylazo)-2,4,5-trihydroxybenzene (Published) Pratap Singh Kadyan*, Devender Singh, Ashok Sharma [§] , Poonam and Sonia Verma Journal of Indian Council of Chemist, 28 (2011), 01-04
3	Influence of smoking on serum metal profile – a study on smokers suffering from cancer and non-smoker subjects from North India Sonia Verma ^a , SudeshYadav ^{b*} , IshwarSingh ^a , P. S. Kadyan ^a , D Singh ^a (Communicated)
4	Selective Determination of Uranium Using 1-(2-Quinolylazo)-2,4,5-trihydroxybenzene as a Colorimetric Reagent Pratap Singh Kadyan ^{1*} , Sonia Verma ² , Devender Singh (Communicated)
5	Trace Analysis of Heavy Metals in Food Grains and Soils of Northern Part of India Sanjeev K. Yadav ^a , Sonia Verma ^b , P. S. Kadyan ^c , DevenderSingh ^c , Anita Sharma ^c , IshwarSingh ^{c*} (Communicated)
Research papers presented/accepted in conferences/ Seminars	
1	Paper is presented in National Conference on “ Environmental and Health Issues: In a Changing Climatic Scenario (EHICCS-2010) ”, at Department of Environmental Sciences, Maharshi Dayanand University, Rohtak.
2	Paper is presented in 6th National Conference on “ Thermodynamics of Chemical and Biological Systems (NCTCBS -2011) ”, at Department of Chemistry, Maharshi Dayanand University, Rohtak.
3	Paper is presented in National Conference on “ Social, Educational, Technological and Medicinal Relevance of Chemistry (SETMRC-2011) ”, at School of Studies in Chemistry and Biochemistry, Vikram University, Ujjain.
4	Paper is presented in National Conference on “ global Challenges- Role of Science and Technology in Giving Their Solutions (GCRSTS-2012) ”. Deptt. of Applied Sciences & Hum., ECS & CSE; The Technological Institute of Textile and Sciences, Bhiwani.
5	Paper is presented in National Seminar on “ Environmental Pollution and its mitigation strategies-2012 ”, School of Environmental Sciences, J. N. U. New Delhi-110067.
Seminar/ workshop/ conferences Attended	
1	National seminar on “ Microbs and Resource Management-2011 ” organized by Association of Microbiologists of India-Rohtak, Maharshi Dayanand University, Rohtak.
2	One day National Workshop on “ Recent Trends in Chemistry-2011 ”. Department of Chemistry, DCRUST, Murthal (Sonipat).

3	One day National Workshop on “ Material Sciences-2010 ”. Department of Physics, Maharshi Dayanand University, Rohtak.
4	Two day National Workshop on “ Current Perspectives in Advance Material Sciences-2012 ”. Pt. Neki Ram Sharma Government College, Rohtak.

Dr. Sunil Kumar Jangra

Research Papers in Journals/ Proceeding of Conferences -Published/accepted/communicated	
1	Topological and thermodynamic studies for binary mixtures of 1, 4-dioxane with anilines at 308.15 K, V. K. Sharma, Sunil K. Jangra , Jaibir S. Yadav, Neeti and Dimple Sharma, J. Solution Chem. 40, 1563–1581, 2011. (impact factor-1.335)
2	Excess molar volumes of ternary liquid mixtures composed of 1, 4-dioxane, <i>o</i> -toluidine, and aromatic hydrocarbon at temperature of 308.15 K. Sunil K. Jangra , Neeti, J. S. Yadav, Dimple and V. K. Sharma, J. Mol. Liquids, 158, 192-196, 2011 . (impact factor-1.649)
3	Thermodynamic studies of molecular interactions in mixtures of <i>o</i> -toluidine with pyridine and picolines: Excess molar volumes, excess molar enthalpies and excess isentropic compressibilities, Neeti, Jaibir S. Yadav, Sunil K. Jangra , Dimple and V. K. Sharma, J. Chem. Thermodyn., 43, 782-795, 2011. (impact factor-2.794)
4	Thermodynamic properties of binary mixtures of tetrahydropyran with pyridine and isomeric picolines: Excess molar volumes, excess molar enthalpies and excess isentropic compressibilities, Neeti, Sunil K. Jangra , J. S. Yadav, Dimple and V. K. Sharma. Thermochim. Acta 518, 13-26, 2011. (impact factor-1.899)
5	Thermodynamic investigations of ternary <i>o</i> -toluidine + tetrahydropyran+ N,N-dimethylformamide mixture and its binaries at 298.15,303.15 and 308.15K, Neeti, S. K. Jangra , J. S. Yadav, Dimple and V. K. Sharma, J. Mol. Liquids 163, 36-45, 2011. (impact factor-1.649)
6	Topological investigations of molecular interactions of binary and ternary mixtures containing tetrahydropyran, <i>o</i> -toluidine and N-methylformamide Neeti, Sunil K. Jangra , J.S. Yadav, Dimple, V.K. Sharma, Thermochim. Acta 524, 92–103, 2011. (impact factor-1.899)
7	Topological and thermodynamic investigations of ternary mixtures containing cyclic ether: Excess molar volumes, Sunil K. Jangra , J. S. Yadav, Neeti, Dimple and V. K. Sharma, J. Solution Chem., 40, 1055-1066, 2011. (impact factor-1.335)
8	Topological and thermodynamic investigations of ternary mixtures containing cyclic ether: Excess molar enthalpies, Sunil K. Jangra , Neeti, Jaibir S. Yadav, Dimple and V. K. Sharma. J. Mol. Liquids, 162, 122-128, 2011. (impact factor-1.649)
9	Thermodynamic and topological investigations of ternary mixtures with <i>o</i> -toluidine, tetrahydropyran, and picolines: Excess molar volume and excess isentropic compressibility, Neeti, S. K. Jangra , Dimple Sharma, V. K. Sharma, J. Chem. Thermodyn., 47, 109–119, 2012. (impact factor-2.794)
10	Excess molar enthalpies of ternary mixtures containing <i>o</i> -toluidine + tetrahydropyran with pyridine or isomeric picolines or benzene or toluene at 308.15 K, Neeti, S. K. Jangra , D. Sharma, V. K. Sharma, Thermochim. Acta, 531, 28-34, 2012. (impact factor-1.899)

11	Excess molar enthalpies for binary and ternary mixtures containing cyclic ether, 2-methylaniline and aromatic hydrocarbons, Sunil K. Jangra , Neeti, J. S. Yadav, Dimple, V. K. Sharma, <i>Thermochim. Acta</i> , 530, 25–31, 2012. (impact factor-1.899)	
12	Excess molar volumes and excess isentropic compressibilities of <i>o</i> -toluidine + tetrahydropyran with pyridine or benzene or toluene ternary mixtures at 298.15, 303.15 and 308.15K, Neeti, S. K. Jangra , D. Sharma and V. K. Sharma, <i>J. Solution Chem.</i> (communicated) 2012. (impact factor-1.335)	
Research papers presented/accepted in conferences/ Seminars		
1	Thermodynamic properties of ternary liquid mixtures of 2-Pyrrolidinone with aromatic hydrocarbons	presented in 97th Indian Science congress held at Tiruvananthapuram, Kerla on 03-07 Jan, 2011.
2	Topological and Thermodynamic studies..... Anilines at 308.15 K	presented in 98th Indian Science congress held at SRM University, Chennai on 03-07 Jan, 2011.
3	Excess molar enthalpies for ternary mixtures containing cyclic ether, <i>o</i> -toluidine and aromatic hydrocarbon	presented in 6 th National conference on thermodynamics of chemical and biological system (NCTCBS-2011) held at Department of chemistry, M. D. U. Rohtak on 2-4 Nov. 2011.
4	Molecular interactions of binary mixtures containing tribromomethane (i) + n-hexane or n-heptane (j)	presented in National conference on Global challenges-role of science and technology in giving their solutions(GCRSTS-2012) held at The Technological Institute of Textile and science on March 3-4, 2012.
Seminar/ workshop/ conferences Attended		
1	National seminar on recent advances in chemistry and their impact on environment (NSRACE-11) held at Department of chemistry, Punjabi University, Patiala on 15-16 Feb., 2011.	
Activities performed		
1	A seminar was organised in the dept. of chemistry on 17 th Nov. 2011. The main delegates were: <ul style="list-style-type: none"> ➤ Prof. Ishwar Singh, Dept. of Chemistry, M.D. University & Director of Research of M.D. University. Topic: Metal complexes as anticancer agents ➤ Dr. A.K. Sharma, Prof. and Chairman, Material Science and Technology, DCRUST, Murthal, Sonapat. Topic: Advanced nano-composite material for future energy storage. 	
2	State level quiz contest washeld in the Dept. of Chemistry on 15 th Nov. 2011	
3	A blood donation camp was organised in the dept. of chemistry on 28 th Sept. 2011 in which 108 students donated their blood.	
Programme Started		
1	In 2008, post graduate programme for chemistry with specialization in Organic and physical courses have been started and are in continuation with excellent performance of the students	

2	Alumni- Association was constituted and election of Office bearers was done in the Dept. of Chemistry on 21 st Oct. 2011
3	Semester System was introduced 2 years back
Significant Achievements	
1	Ms. Rashmi Dahiya secured first class first position and was awarded Gold medal in <u>M.Sc. Chemistry</u> examination, May 2011. She was honoured by the Chief-Minister, Hon. Sh. Bhupender Singh Hooda in convocation held in M.D.U., Rohtak.
2	Students of M.Sc. Chemistry participated in the Inter-District Science exhibition on 28 th Feb. 2012 and got the third position in G.V.M. Girls College, Sonapat.
3	Ms. Preeti of B.Sc. II got the <u>first position</u> in the “On the spot poster making” competition, State level competition held on 15 th Nov. 2011 in the Department of Chemistry, Jat college, Rohtak.
4	Ms. Pinki of B.Sc. I got the <u>third position</u> in the State level poster making competition held on 15 th Nov. 2011.
5	In the state level quiz contest of Chemistry held on 15 th Nov. 2011, Manju, Sangita and Pinki of B.Sc. classes, got the <u>first position</u> while Amit, Annu and Neeraj of B.Sc. classes of our College, got the <u>Second position</u> .

Physics Department

Infrastructural Development

S. No.	ACTIVITY
1	Advanced Physics Lab. is set-up with instruments
2	One computer Lab is set-up which is equipped with computers of advanced configurations
3	Departmental Library is set-up in the light of specific need/ syllabus based books for the students (UG & PG) and teachers
4	New computer aided technology based, a Smart Class room has been set-up in the Dept. of Physics, which is a great value of teaching in modern education

Ph.D. completed/ submitted/ enrolled

S. No.	Faculty Name	University/ Institution	Status
1	Sh. Anand Malik	K.U., Kurukshetra	Submitted in April 2012
2	Sh. Shishpal	C.D.L.U. Sirsa	Submitted synopsis for registration
3	Sh. Parveen Hooda	Department of Physics and Astrophysics, University of Delhi, Delhi	Joined Ph.D. Programme with JRF Fellowship

Publications in session 2011-12

Research Papers in Journals/ Proceeding of Conferences -Published/accepted/communicated		
1	Exact traveling wave solutions of some nonlinear equations by (G`/G)- expansion method” Anand Malik , Fakir Chand and S.C. Mishra, Appl. Math. and Computation, 216, 2596 (2010)	
2	Exact solutions of nonlinear diffusion-reaction equations”, Anand Malik , Fakir Chand, Hitender Kumar and S.C. Mishra, Ind. J. Phys. 86, 513 (2012)	
3	Exact traveling wave solutions of some nonlinear evolution equations by (G`/G)-expansion method” Fakir Chand, Anand Malik and S.C. Mishra, Pramana J. Phys. 78, 513 (2012)	
4	Enhancement in second harmonic generation efficiency, Laser damage threshold and optical Transparency of Mn ²⁺ doped L-alanine crystal: A Correlation with crystal perfection. S.K. Kushwaha, S.P. Rathee, K.K. Maurya, G. Bhagvan Narayan, Journal of Crystal Growth 328 (2011) 81-88.	
5	Some more applications of (G`/G)-expansion method, Anand Malik , Fakir Chand, Hitender Kumar and S.C. Mishra, Communicated	
6	Analytic study of nonlinear diffusion-reaction equations with a nonlinear convective term” Anand Malik , H. Kumar, Fakir Chand and S.C. Mishra, Communicated	
7	Exact solutions of density independent and dependent nonlinear diffusion reaction equations” Anand Malik , H. Kumar, Fakir Chand and S.C. Mishra, Communicated	
Research papers presented/accepted in conferences/ Seminars		
1	Superposition model analysis of zero-field splitting parameters for Mn ²⁺ in Bis (L-asparaginato) Zn and Tricalcium Phosphate single crystals, R.S. Bansal and Ravi Deo	Presented in International conference on Quantum Effects in solids of Today. Dec 20-23, 2010 at National Physical Laboratory, New Delhi, India.
2	Superposition model analysis of zero-field splitting parameters for Mn ²⁺ in NSHH and MSHH single crystals, R.S. Bansal and Meetu Bharti	Presented in International conference on current Developments in Atomic, Molecular, optical and Nanophysics with applications. Dec 14-16, 2011 held at Department of Physics and Astrophysics, University of Delhi, New Delhi, India.

Zoology Department

Infrastructural Development

S. No.	Activity
1	An instrument known as- water and soil analysis kit was purchased

Ph.D. completed/ submitted/ enrolled

S. No.	Faculty Name	University/ Institution	Status
1	Sh. Suresh Kumar Chhikara	Kurukshetra University, Kurukshetra	Completed

Publications in session 2011-12

Dr. Sharda Abusaria

Seminar/ workshop/ conferences Attended

1	Participated in National Conference organised by Science Faculty of J.V.M.G.R.R College, Charkhi Dadri (Haryana).
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Dr. Suresh Kumar Chhikara

Research Papers in Journals/ Proceeding of Conferences -Published/accepted/communicated

1	Incidence of colour blindness among fifteen endogamous groups of Haryana (Published)
2	Morphogenetical and behavioural diversity among five endogamous groups of Haryana (Published)
3	Gene diversity among ten endogamous groups of Haryana (Accepted)
4	Studies on Morphogenetical and behavioural variations on five endogamous groups of Haryana.

Activities performed

1	As part of curriculum an educational tour to CIFE (Fish Farm), Lahli, for the students of B.Sc. III (Medical) under the guidance of Dr. Sharda Abusaria assisted by Sh. Dil Singh was organised. The program involved basic research of applied value focusing more on developing site specific and user friendly technological packages. This activity transformed students of Zoology from a casual disinterested spectator to a keen observer of fish, their identification, behaviour, culture and pond water characteristics.
2	Department of Zoology purchased an instrument known as- water and soil analysis kit. The students showed keen interest in the use of this sensitive instrument for the analysis of water and soil samples collected by them for their project work.

PRINCIPAL