EVALUATIVE REPORT THE DEPARTMENT OF CHEMISTRY

1. Name of the Department: **Chemistry**
2. Year of establishment: **1963**
3. Is the Department part of a Faculty of the university? **Yes, Faculty of Natural Sciences**
4. Names of Programmes / Courses offered (UG, PG, M.Phil., Ph.D., Integrated Masters; Integrated Ph.D., etc.)

S. No.	Name of course	Type of Programme	Specialization	Annual Intake
1	B.Sc. (Hons)	Regular, Fulltime	Chemistry	40
2	M.Sc.	Regular, Fulltime	1. Organic 2. Inorganic 3. Physical 4. Materials	40
3	Ph.D.	Regular, Fulltime	1. Organic 2. Inorganic 3. Physical 4. Materials	As per norms-

5. Interdisciplinary courses and departments involved: None
6. Courses in collaboration with other universities, industries, foreign institutions, etc.: None
7. Details of programmes discontinued, if any, with reasons : NA
8. Examination System:

S. No.	Name of programme	Specialization	Examination system
1	B.Sc. (Hons.)	Chemistry	Annual system (till 2012) Semester system since 2012
2	M.Sc.	Organic, Inorganic, Physical	Annual system (till 2010) Semester system since 2010
3	Ph.D.	Organic, Inorganic, Physical	Course work in semester system since 2010

9. Participation of the department in the courses offered by other departments:

S. No.	Name of programme	Remarks
1	B.Sc. (Hons) Physics	Chemistry as a subsidiary subject
2	B.Sc. (Hons) Maths	Chemistry as a subsidiary subject
3	B.Sc. (Hons) Geography	Chemistry as a subsidiary subject
4	B.Sc.	Chemistry as a main subject

EVALUATIVE REPORT THE DEPARTMENT OF CHEMISTRY

10. Number of teaching posts sanctioned and filled (Professors/Associate Professors/Asst. Professors)

S. No.	Posts	Sanctioned	Filled	Actual
1	Professors	02	02	09 (07 CAS)
2	Associate Professors	02	02	02 (CAS)
3	Assistant Professors	10	09	09

11. Faculty profile with name, qualification, designation and specialization (D.Sc./D.Litt./ Ph.D. /M.Phil. etc.)

S. No.	Name	Designation	Qualification	Specialization	No. of Years of Teaching Experience	No. of Ph.D. students guided for the last 4 years
1	Tabrez A Khan	Professor	M.Sc, M.Phil, Ph.D.	Inorganic/ Environmental Chemistry	30	03
2	Anwar Ali	Professor	M.Sc, M.Phil, Ph.D.	Physical Chemistry	34	07
3	Kishwar Saleem	Professor	M.Sc, M.Phil, Ph.D.	Organic Chemistry	41 (Retd. in 2013)	02
4	Sharif Ahmad	Professor	M.Sc, M.Phil, Ph.D.	Materials Chemistry	30	06
5	Khalid Iftikhar	Professor	M.Sc, M.Phil, Ph.D.	Inorganic Chemistry	31	03
6	Amir Azam	Professor	M.Sc, M.Phil, Ph.D.	Organic Chemistry	29	04
7	Zaheer Khan	Professor	M.Sc, M.Phil, Ph.D.	Physical Chemistry	20	-
8	Rabia Ahmad	Professor	M.Sc, M.Phil, Ph.D.	Physical Chemistry	22	01
9	Nahid Nishat	Professor	M.Sc, M.Phil, Ph.D	Materials Chemistry	17	07
10	Imran Ali	Professor	M.Sc, Ph.D.	Organic Chemistry	23	05

11	Nasreen Mazumdar	Associate Professor	M.Sc, M.Phil, Ph.D.	Materials Chemistry	19	02
12	Athar A. Hashmi	Associate Professor	M.Sc, M.Phil, Ph.D.	Inorganic Chemistry	23	02
13	Faqeer Mohammad	Assistant Professor	M.Sc, M.Phil, Ph.D.	Organic Chemistry	19	04
14	Saiqa Ikram	Assistant Professor	M.Sc., Ph.D.	Inorganic Chemistry	12	02
15	Nasimul Hoda	Assistant Professor	M.Sc., Ph.D.	Organic Chemistry	16	-
16	Tokeer Ahmad	Assistant Professor	M.Sc., Ph.D.	Physical Chemistry	09	03
17	Sapan Kumar Jain	Assistant Professor	M.Sc., M.Phil.	Physical Chemistry	08	-
18	Saif Ali Chaudhary	Assistant Professor	M.Sc., Ph.D.	Inorganic Chemistry	15	-
19	Rahisuddin	Assistant Professor	M.Sc., Ph.D.	Inorganic Chemistry	11	-
20	Ufana Riaz	Assistant Professor	M.Sc., Ph.D.	Materials Chemistry	07	-

12. List of senior Visiting Fellows, faculty, adjunct faculty, emeritus professors: None

13. Percentage of classes taken by temporary faculty – programme-wise information

S. No.	Program	Percentage	Remarks
1.	B.Sc.	6	Taken by guest faculty
2.	M.Sc.	Nil	Nil

14. Department-wise Student Teacher Ratio: 15:1

15. Number of academic support staff (technical) and administrative staff: sanctioned and filled:

(A) Technical Staff

S. No.	Staff	Sanctioned	Filled
1	Senior Technical Assistant	01	0
2	Senior Lab Assistant	03	03
3	Junior Lab Assistant	04	04
4	Lab Attendant	01	01

	Total	09	08

(B) Administrative Staff

S. No.	Staff	Sanctioned	Filled
1	Upper Division Clerk (UDC)	01	01
2	Peon	01	01
	Total	02	02

16. Research thrust areas recognized by funding agencies

S. No.	Branch	Thrust Area
1	Inorganic Chemistry	1. Lanthanide Chemistry. 2. Macrocyclic and supra-molecular complexes and metal containing polymers. 3. Water treatment by adsorption and electrochemical techniques. 4. Biopolymers. 5. Metal complexes and their anticancer activity.
2	Organic Chemistry	1. Synthesis of heterocyclic compounds. 2. Development of natural dyes. 3. Simple and chiral separations by chromatography. 4. Anticancer drugs.
3	Physical Chemistry	1. Interactions in binary/ternary aqueous mixtures containing amino acids/peptides and surfactants/carbohydrates. 2. Kinetics and mechanisms of noble metal nanoparticles. 3. Study of solid-state reactions. 4. Chemistry of nanostructured materials. 5. Electronic structure of conjugated molecules.
4	Materials Chemistry	1. Anticorrosive polymeric paints/coatings from vegetable oils. 2. Nanometal oxides and their applications in biosensors. 3. Polymers (Water borne, Biodegradable and Nano-conducting) and their applications 4. Biological and coating properties of coordination polymers.

17. Number of faculty with ongoing projects from a) national b) international funding agencies and c) Total grants received. Give the names of the funding agencies and grants received project-wise.

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(A) National projects

S. No.	Name of Faculty	Title of project	Funding	Grant (Rs.)
1	Prof. Sharif Ahmad	Development of high performance conducting polymer dispersed marine coatings	NRB DRDO	34,89,600/- (2008-2011)
2	Prof. Amir Azam	(i) Design and synthesis: A new approach towards the development of novel derivatives of heterocyclic antiamoebic molecules	CSIR	12,11,000/- (2008-2011)
		(ii) Synthesis of some heterocyclic compounds	UGC	10,55,800/- (2012-2015)
3	Dr. Imran Ali, Prof. Tabrez Alam Khan, Dr. Atiqur Rehman	Monitoring of arsenic in ground water of Ballia district, Uttar Pradesh, using remote sensing and GIS techniques	Ministry of Environ. & Forests	26,14,962/- (2011-2013)
4	Dr. Tokeer Ahmad	(i) Microemulsion synthesis of metal (mainly Au and Ag) nanoparticles and their nanosized oxides	DST (Fast)	19,68,000/- (2007-2010)
		(ii) Solvothermal synthesis and structural characterization of ZnO, CdO, SnO_2 and In_2O_3 based dilute magnetic semiconductor nanoparticles.	CSIR, India	17,92,800/- (2011-2014)
5	Dr. Rahisuddin	(i) Synthesis, characterization and cytotoxic studies of transition metal complexes of thalidomide and its derivatives	DST-SERC Fast Track	14,67,000/- (2010-2013)
		(ii) Synthesis, characterization and biological evaluations on the metal complexes of novel N- substituted phthalimide ligands	UGC	9,85,800/- (2012-2015)

6	Dr. Ufana Riaz	(i) Development of self assembled nanostructured poly(N-vinyl carbazole and poly(o- toluidine) intercalated silicate (bentonite) nanocomposites using benign techniques	DST-SERC Fast Track	18,82,000/- (2009-2012)
		(ii) Microwave-assisted rapid catalytic degradation of some textile dyes using poly (1-napthylamine)	UGC	10,89,300/- (2012-2015)
		(iii) Enhancement of fluorescence properties of conjugated polymer nanoparitcles using luminol and its derivatives for their application in near infrared (NIR) imaging	DST	39,73,800/- (2014-2017)
7	Prof. Kishwar Saleem	Synthesis and characterization of Ni(II) and Pt(II) complexes of azole based ligands: Potential anticancer agents.	UGC	1,30,000/- (2010-2013)
8	Dr. Nasimul Hoda	(i) Design and development of acetyl cholinesterase inbitors	UGC	1,84,000/- (2010-2012)
		(ii) Design, synthesis and biological screening of new class of Plasmodium falciparum phosphoethanolamine methyltransferase inhibitors	JMI	1,00,000/- (2014)
9	Dr. Saiqa Ikram	(i) Development of hydrogels based smart wound dressings	DBT	61,05,800/- (2008-2010)
		(ii) Studies for the sulphonation of co-polymer grafted PEEK films.	UGC	1,40,000/- (2012-2014)

		(iii) In-situ Nano Silver formation based on Bio-polymer Hydrogel membranes for antimicrobial activity		
10	Prof. Anwar Ali	Study of amino acid-surfactant/ carbohydrate interactions in aqueous medium	UGC	6,17,800/- (2008-2011)
11	Dr. Athar Adil Hashmi	Green pesticides: Preparation, characterization and biological studies of metallo-organyl matrixes	UGC	6,03,300/- (2008-2011)
			Total	**Rs. 2,95,10,962**

(B) International Projects

S. No.	Name of Faculty	Title of project	Funding agency	Grant
1	Dr. Nasreen Mazumdar	Development of natural polymer based iodine supplementation to combat iodine deficiency, a nutritional problem faced by Indian women.	AAUW Educational Foundation, Washington, USA.	USD 5,000 (2009-2010)
			Total	**Rs. 2,50,000**

18. Inter-institutional collaborative projects and grants received a) All India collaboration b) International

(b) International Collaborative Projects

S. No.	Name of Faculty	Title of project	Funding agency	Total Grant

1	Dr. Tokeer Ahmad and Dr. Omar A. Al-Hartomy	Polymeric citrate precursor synthesis of nanocrystalline $Ba_{1-x}(Pb, Sr)_xZrO_3$: Structural characterization and dielectric properties.	University of Tabuk, Kingdom of Saudi Arabia	SR 6,00,000 ≈ Rs. 75,00,000 (2010-2012)
			Total	**» Rs. 75,00,000**

19. Departmental projects funded by DST-FIST; UGC-SAP/CAS, DPE; DBT, ICSSR, etc.; total grants received.

S. No.	Funding agency	Grant (Rs.)
1	UGC-SAP (DRS- II)	70,00,000
2	UGC-SAP (DRS- I)	49,00,000
3	DST-FIST (Level- I)	22,00,000

20. Research facility / centre with
- State recognition: Nil
- National recognition: Nil
- International recognition: Nil

21. Special research laboratories sponsored by / created by industry or corporate bodies: Nil

22. Publications

S. No.	Item	Total upto 2014
1	Number of papers published in peer reviewed journals (national / international)	588
2	Books	4
3	Chapters in Books	22
4	Laboratory Manuals	02
5	Monographs	-
6	Number listed in International Database (For e.g. Web of Science, Scopus, Humanities International Complete, Dare Database - International Social Sciences Directory, EBSCO host, etc.)	Science Direct, Scopus,Web of Science, Google Scholar

7	Citation Index	02-80
8	SNIP (Highest range)	0.9-4.5
9	SJR (Highest range)	0.192-3.3
10	Impact factor range	1-40
11	h-index	1-33

S. No.	Name of Faculty	Designation	Books published	Chapters published	Papers published	h- index
1	Tabrez Alam Khan	Professor	-	01	18	9
2	Anwar Ali	Professor	-	-	46	20
3	Kishwar Saleem	Professor	-	-	24	7
4	Sharif Ahmad	Professor	2 (manual) + 1 = 3	6	82	25
5	Khalid Iftikhar	Professor	-	-	22	12
6	Amir Azam	Professor	-	-	50	25
7	Zaheer Khan	Professor	-	-	59	18
8	Rabia Ahmad	Professor	-	-	01	2
9	Nahid Nishat	Associate Professor	-	-	31	12
10	Imran Ali	Associate Professor	2	5	107	33
11	Nasreen Mazumdar	Associate Professor	-	2	12	5
12	Athar Adil Hashmi	Associate Professor	-	2	33	9
13	Faqeer Mohammad	Assistant Professor	-	-	15	8
14	Saiqa Ikram	Assistant Professor	-	1	16	7
15	Saif Ali Chaudhry	Assistant Professor	-	-	01	1
16	Nasimul Hoda	Assistant Professor	-	-	-	-
17	Sapan Kumar	Assistant Professor	-	-	01	6

18	Tokeer Ahmad	Assistant Professor	1	-	44	16
19	Rahisuddin	Assistant Professor	-	-	09	5
20	Ufana Riaz	Assistant Professor	3	4	46	10

Please see Annexure - ERD I: Publications

23. Details of patents and income generated

S. No.	Name of faculty	Designation	Patent
1	Imran Ali	Prof.	Integrated through bore direct coupled low volume HPLC guard and preparative columns unit, IPO 547/DEL/2013
2	Imran Ali & V.D. Gaitonde	Prof.	Smart solvent saving HPLC reservoir, IPO, New Delhi, 46/DEL/2012.
3	Saiqa Ikram	Assitt Prof.	PVA supported resins for arsenic separation and the products thereof, IPA 837/DEL/2012

24. Areas of consultancy and income generated

S. No.	Name of Faculty	Designation	Patent
1	Ufana Riaz	Assistant Professor	Consultancy provided to Grey Films Pvt. Ltd. for science documentary series made for Vigyan Prasar, Department of Science and Technology, Government of India. The documentary topics were- Green house effect, oxygen, macromolecules and atmospheric

25. Faculty selected nationally/ internationally to visit other laboratories in India and abroad

S. No.	Name of Faculty	Designation	National/International visit
1	Nasreen Mazumdar	Associate Professor	International Scholar at the Department of Chemistry and Chemical Biology, Rutgers University, New Jersey, USA, 2008-2009.

2	Dr. Tokeer Ahmad	Assistant Professor	1. Visited Department of Chemistry, Michigan State University, East Lansing, USA, June 17-22, 2011 2. Visited Department of Chemistry and Biochemistry, Rowan University, Glassboro, NJ, USA during, May 8-12, 2009. 3. Visited Department of Chemistry, King Abdulaziz University, Jeddah, Saudi Arabia, April 8-14, 2009.

26. a) National committees b) International committees c) Editorial Boards d) any other (please specify)

S. No.	Name of faculty	Committees / Editorial boards
1	Prof. Sharif Ahmad	Member of editorial board of the Indian Science Abstract (ISA) NISCAIR for 2011-2013 and 2015-2015.
2	Prof. Anwar Ali	Member of Research Degree Committee, Dayalbagh Educational Institute (Deemed University), Agra.
3	Prof. Tabrez Alam Khan	1. Member of Regional Advisory Board, Central Board of Alam Khan Workers Education, Ministry of Labor & Employment, Govt. of India. 2. Member Editorial board, Scientific Research Journal
4	Prof. Imran Ali	1. Editor of Science Jet (Simplex Academic Publishers, India 2. Guest Editor, Special issue of Current Cancer Drug Targets on 'Nano Drugs: Novel Agents for Cancer Chemo-Therapy' (Bentham Press, USA). Member of Editorial Boards: 1. Recent Patents on Nanomedicine (Bentham Science Publishers, USA). 2. Advances in Analytical Chemistry (Scientific & Academic Publishing, USA). 3. Journal of Solid Tumors, Science Education Press, Canada. 4. Current Drug Therapy (Bentham Science Publishers,USA). 5. Environmental Science and Pollution Research, Springer, The Netherlands. 6. Archives of Environmental Science (Environmental Protection Science Group, China), http://aes.asia.edu.tw

		7. Gazi University Journal of Science (GUJS) 8. Egyptian Pharmaceutical Journal, Academy of Scientific Research & Technology, The National Centre for Information & Documentation, Dokki, Cairo, Egypt. 9. International Journal of Water Resources and Environmental Engineering, (73023 Victoria Island, Lagos, Nairobi). 10. Medical Practice and Reviews, (73023 Victoria Island, Lagos, Nairobi). 11. International J. Genuine Traditional Medicine, Assoc. Genuine Trad. Med. S. Korea

27. Faculty recharging strategies:
Faculty members attend various orientation and refreshers courses, workshops Seminars/conferences/symposia.

28. Student projects
- percentage of students who have done in-house projects including inter-departmental projects: 100% (at PG level)
- percentage of students doing projects in collaboration with other universities / industry / institute: 0%

29. Awards / recognitions received at the national and international level by
- Faculty

S. No.	Name of faculty	Name of the Award	Awarding Authority	Year and other details
1	Dr. Tokeer Ahmad	DST-DFG award	DST, Govt. of India	2009, Meeting of Nobel Laureates in Chemistry
		B. N. Kailoo ISCAS-2011 Medal	Indian Association of Solid State Chemists and Allied Scientists (ISCAS)	2011, Medal has been conferred for the significant contribution to research in Solid State Chemistry and AlliedAreas

- Doctoral / Post doctoral fellows

S. No.	Name of the Award	Name of Student	Awarding Authority other details	Year and

1	Young Scientist Award	Eram Sharmin (Post doctoral)	National symposium on Nano-Science: Theory and applications preceded by workshop on microwave: Principals and applications NSTA-MAP-2009, JNU, New Delhi, 6th -7th November, 2009	2009

- Students

S. No.	Name of the Award	Name of Student	Awarding Authority	Year
1.	Best paper Award	Nisha Khan	First national conference on "Recent Advances in polymer nanocomposites" Organized by Dept. of Physics, Zakir Hussain College, University of Delhi	2011

30. Seminars/ Conferences/Workshops organized and the source of funding (national / international) with details of outstanding participants, if any.

S. No.	Name of the conference seminar /workshop	Funding & sponsoring authorities	Year	Outstanding participants
1	2nd One day seminar on "Recent Advances in Chemistry 2014"	UGC-SAP (DRS-II) & JMI	2014	Prof. K.K. Upadhyay (BHU, Varanasi), Prof. T.S. Lubana (GNDU, Amritsar), Prof. Harpal Singh (IIT, Delhi)
2	1st One day seminar on "Recent Advances in Chemistry 2013"	UGC-SAP (DRS-II) & JMI	2013	Prof. B.D. Malhotra (NPL, Delhi), Prof. AK Ganguli (IIT, Delhi)
3	5th One day seminar on "Recent Advances in Chemistry 2012"	UGC-SAP (DRS-I) & JMI	2012	Prof. S. Tabassum (AMU, Aligarh), Prof. M. R. Maurya (IIT, Roorkee)

4	7th National Symposium and Conference on Solid State Chemistry and	DST, DAE-BRNS, CSIR, DRDO, INSA, Society for Semiconductor	2011	Prof. J.Gopalakrishnan (IISc, Bangluru) Prof. T. Ito (Japan) Prof. Ayed S.sAl-Shihri (KKU, Saudi Arabia)
5	4th One day seminar on "Recent Advances in Chemistry 2011"	UGC-SAP (DRS-I) & JMI	2011	Prof. M. Muneer (AMU, Aligarh)
6	3rd One day seminar on "Recent Advances in Chemistry 2010"	UGC-SAP (DRS-I) & JMI	2010	Prof. B. D. Gupta (IIT, Kanpur)
7	2nd One day seminar on "Recent Advances in Chemistry 2009"	UGC-SAP (DRS-I) & JMI	2009	Prof. AK Ganguli, IIT, Delhi
8	1st One day seminar on "Recent Advances in Chemistry 2008"	UGC-SAP (DRS-I) & JMI	2008	Prof. Mazahir Kidwai, DU, Prof. Mushahid Husain, JMI

31. Code of ethics for research followed by the departments:
    a) Honesty and Integrity in research.
    b) Honor patents, copyrights and other intellectual property rights. Acknowledge and give credit to all the contributors and funding agencies.
    c) Abide by relevant Government laws and institutional policies.

32. Student profile course-wise:

S. No.	Name of the Course (refer to question no.4)	Applications received	Selected		Pass percentage	
			Male	Female	Male	Female
1	B.Sc. (H) Chemistry	5145	72	68	65	61
2	M.Sc. Chemistry	3128	117	68	86	86
3	Ph.D. Chemistry	404	80	66	100	100

33. Diversity of students

S. No.	Name of the Course (refer to question no. 4)	% of students from the same university	% of students from other universities within the State	% of students from universities outside the State	% of students from other countries

1	B.Sc. (Hons)	17	49	42	0
2	M.Sc.	20	32	46	2
3	Ph.D.	11	27	61	1

34. How many students have cleared Civil Services and Defense Services examinations, NET, SET, GATE and other competitive examinations? Give details category-wise.

S. No.	Name of student	Category	Examination cleared	Year
1	Ritu Bhatia	SC	NET	2008
2	Mohd. Ibrahim Dar	General	NET-JRF GATE	2008 2008
3	Mohd. Waseem	General	NET-JRF	2008
4	Varun K. Singh	General	NET-JRF	2009
5	Rashid Ali	General	NET-JRF	2009
6	Ravi Tripathy	General	NET-JRF	2009
7	Jincy Joy	General	NET	2010
8	Afreen Inam	General	NET-JRF	2010
9	Zeba Khan	General	NET	2010
10	Md. Rehan	General	NET-JRF	2010
11	Vijay S. Tiwari	General	NET GATE UPPCS	2011 2010 2011
12	Shabnam Pathan	General	NET	2011
13	Umma Kulsum	General	NET GATE	2011 2011
14	Nisha Khan	General	GATE	2011
15	Shokit Hussain	OBC	NET	2011
16	Rahees KM	General	NET	2011
17	Momina Nazir	General	NET	2011
18	Urvashi Singh	General	NET GATE	2012 2011
19	Javeed Ahmad Sheikh	General	NET GATE	2011 2010

20	Saami Ahmad	OBC	NET GATE	2012 2012
21	Vipin	SC	NET-JRF	2012
22	Ahsanul Haq	General	NET	2012
23	Shrawan Kumar Bunkar	PD	NET	2012
24	Vipin Kumar Jain	General	NET-JRF	2012
25	Shamshun Neha	OBC	NET-JRF	2012
26	Imran	Gneral	NET	2012
27	Kausar Raza	General	NET GATE	2014 2014
28	Kanika Kohli	General	NET-JRF	2014
29	Prachi Gupta	General	NET	2014
30	Khagesh Vashisht	General	NET	2014
31	Shiwani Gupta	General	NET	2014
32	Lokesh	General	NET	2014
33	Mohd. Amir	General	NET	2014
34	Akshay Kalra	General	GATE	2014
35	Ramiz Raza	General	GATE	2014
36	Tarana Umar	General	GATE	2014
37	Shilpi Rana	General	GATE	2014
38	Mohd. Shariqul Islam	General	GATE	2014

35. Student progression

S. No.	Student progression	Percentage against enrolled
1	UG to PG	17
2	PG to M.Phil.	NA
3	PG to Ph.D.	13
4	Ph.D. to Post-Doctoral	40
5	Employed • Campus selection • Other than campus recruitment	 2 38

6	Entrepreneurs	Nil

36. Diversity of staff

S. No.	Faculty	Percentage
1	Who are graduates of the same university	5
2	From other universities within the State	5
3	From universities from other States	90
4	From universities outside the country	None

37. Number of faculty who were awarded Ph.D., D.Sc. and D.Litt. 01 (One)

38. Present details of infrastructural facilities

S. No.	Infrastructural Facilities	Remarks
1.	Library	The department has a small collection of text books (~110) for students.
2.	Internet facility	Internet facility is available to each faculty member, and for research scholars and PG students in computer lab.
3.	Total number of class rooms	4 Rooms for UG and PG students
4.	Class rooms with ICT facility	None
5.	Students' laboratories	3 (2 UG +1 PG)
6.	Research laboratories	12

39. List of doctoral, post-doctoral students and Research Associates
40. Number of post graduate students getting financial assistance from theuniversity. None
41. Was any need assessment exercise undertaken before the development of new programme(s)? If so, highlight the methodology. NA

42. Does the department obtain feedback from?
    a. Faculty on curriculum as well as teaching-learning-evaluation? If yes, how does the department utilize the feedback?
    It is proposed to obtain feedback from faculty on curriculum and teaching learning evaluation in due course.
    b. Students on staff, curriculum and teaching-learning-evaluation and how does the department utilize the feedback? : No
    c. Alumni and employers on the programmes offered and how does the department utilize the feedback? : No

43. List the distinguished alumni of the department (maximum 10)

1. Dr. A.R. Kidwai (1940)
   (Former Chairman UPSC, Former Governor to Bihar, West Bengal, Haryana
   Zakir Bagh, New Delhi.
2. Dr. Zakir Murtaza, COO/Chief Scientist
   Applied Biomedical LLC Orange County, Medical Devices
   California Area, USA
3. Dr. Rajesh, Scientist-E
   Department of Materials Physics and Engineering
   National Physical Laboratory (NPL)
   Dr. K.S. Krishnan Marg, New Delhi – 110012
4. Dr. Raj Kumar Joshi, Assistant Professor
   Malviya National Institute of Technology,
   Jaipur, Rajasthan
5. Dr. Raju, Scientist C
   CSIR- North-East Institute of Technology,
   Jorhat, Assam
6. Dr. Rakesh Kumar Sharma, Assistant Professor
   Department of Chemistry,
   Delhi University, Delhi

44. Give details of student enrichment programmes (special lectures / workshops / seminar) involving external experts.

45. List the teaching methods adopted by the faculty for different programmes.

1. Traditional methods
2. Assignments
3. Tutorials
4. Power point

46. How does the department ensure that programme objectives are constantly met and learning outcomes are monitored?

The programme objectives and learning outcomes are monitored through sessional and surprise tests.

47. Highlight the participation of students and faculty in extension activities.

1. NSS
2. NCC
3. Chem-quiz
4. Debate

5. Oral and Poster presentation
6. Sports activity

48. Give details of "beyond syllabus scholarly activities" of the department.
    1. Publication of research papers in peer-reviewed journals.
    2. Presentation of research papers in seminars and conferences.
    3. Members of various academic societies.
    4. Deliver invited talks.
    5. Organization of conferences/seminars.
    6. Evaluation of doctoral thesis.

49. State whether the programme/ department is accredited/ graded by other agencies?
    If yes, give details: No

50. Briefly highlight the contributions of the department in generating new knowledge, basic or applied.
    1. Development of Smart HPLC solvent reservoir: Indian patent Filed (IPO 46/DEL/2012).
    2. Development of PVA supported Resins for arsenic separation & the products thereof, (Patent Application No. 837/DEL/2012).
    3. Integrated through bore direct coupled low volume HPLC guard and preparative columns unit, IPO 547/DEL/2013.
    4. Published Books contributing knowledge in different areas of Chemistry.

51. Strengths, Weaknesses, Opportunities and Challenges (SWOC) of the Department.

Strengths

- Faculty

  The Department has highly qualified and competent faculty, with strong commitment to teaching and research. Over the last 5 years the number of students seeking admission in various courses offered by the Department has increased rapidly.

- Teaching

  The course curricula are regularly updated. B.Sc. (H) and M.Sc. Final year students visit different National laboratories/ industries during educational tours. The students are placed in various academic and R & D organizations. Many PG students have qualified NET (JRF), GATE and other national level exams. Department has become the choice of students for admission at UG, PG and Ph.D. levels.

- Research

  The faculty members are actively engaged in research work in Inorganic, Organic, Physical and Materials Chemistry areas. They have authored quality research publications in reputed National and International Journals with high impact factors. In fact, faculty: publication ratio is as high as 1:5 per year. Most of them present their research work in various conferences. They have written several books, lab manuals and contributed chapters in edited books published by National and International publishers. Department is running many research projects worth Rs.

1.10 crore from different funding agencies like UGC, CSIR, DST, MoEF, ARDB, and NRB. Department organized a 3-day National conference in 2011.

- Student Placement and Enrichment
  PhD, PG and UG students are absorbed in various academic and R&D organizations. Student enrichment programmes are conducted regularly through invited lectures and seminars.
- Achievements
  Department of Chemistry was selected for DST-FIST (Level-I) and UGC–SAP (DRS-I and DRS-II) because of good academic performance and research output. Department possesses various modern instruments like FT-IR, TGA-DSC, GPC, AAS, Fluorescence Spectrometer and CHNSO analyzer.

Weaknesses

- Space
  Department needs additional space for setting more research labs, smart classrooms and seminar halls.
- Instrumentation
  Need of more sophisticated instruments like ICP-MS, GC-MS-MS, LC-MS-MS, ^{1}H- & ^{13}C-NMR, XRD, VSM, HRTEM, FESEM, AFM, STM, etc., is a major constraint in higher quality research work.
- Incentive to faculty
  The faculty needs incentives for high quality research and running projects.
- Financial Resources
  Lack of financial resources is a major constraint.
- Books and Journals
  Departmental library with adequate online journal resources and latest books will add to the strength of the Department.

Opportunities

- Industry-Institution interaction
  Develop active interactions with industries in terms of curriculum development and research.
- New Courses
  Introduce new courses in Industrial Chemistry, Environmental Chemistry and Polymer Technology at Masters level.
- Collaborative Projects and Research
  More collaborative research work/ projects in new and frontier areas with other premier research Institutions.
- Seminars & Conferences
  Organize more National and International conferences and Symposia in major specialized areas of research.
- Faculty Enrichment
  Faculty exchange with other academic institutions of excellence at national and

International levels.

Challenges

- Upgrading quality teaching & research
  To attract t quality faculty with strong motivation for competitive teaching and research.
- Courses & Curricula development in consonance with the emerging needs and trends.
- Sophisticated instrumentation
  Procurement of advanced and sophisticated instruments is a major challenge in view of financial constraints.
- Financial Resources
  Meeting financial crunch is one of the major challenges.
- International Collaboration
  To develop International collaborative teaching and research with foreign Universities/Institutions

52. Future plans of the department.

- Introduction of new courses and curricula.
- National and International collaboration.
- University-Industry interaction.
- Emphasis on patents.
- DST-FIST Phase-II.
- UGC-SAP Phase-III.
- Extension/invited lectures

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