1. *Name of the department:*
Chemistry

2. *Year of Establishment:*
1963

3. *Names of programmes/ courses offered:*
UG (Elective: Drugs & Dyes)
PG (Specialization: Organic Chemistry, Inorganic Chemistry, Physical Chemistry), Ph.D.
Certficate courses: Green Chemistry, Good Laboratory Practices

4. *Names of Interdisciplinary courses and the departments/ units involved:*
Nil

5. *Annual/ semester/ choice based credit system (programme wise):*
Credit Based Semester System

6. *Participation of the department in the courses offered by other departments:*
Nil

7. *Courses in collaboration with other universities, industries, foreign institutions, etc.:*
Nil

8. *Details of courses/programmes discontinued (if any) with reasons:*
Nil

9. *Number of teaching posts:*

Post	Sanctioned (21) Filled (21)	Details
Professors	-	
Associate Professors	07	
Assistant Professors	14	

10. *Faculty profile with name, qualification, designation, specialization, (D.Sc./ D.Litt. /Ph.D./ M. Phil. etc.):*

Name	Qualification	Designation	Specilaitzation	Expereince (Years)	No. of Ph.D. students guided in last 4 years
V. B. Kulkarni	M.Sc.	HOD, Associate Professor	Analytical Chemistry	32	-
P.T. Singh	M.Sc., M.Phil.	Associate Professor	Organic Chemistry	30	-
A.K. Mishra	M.Sc.	Associate Professor	Inorganic Chemistry	28	-
S.R. Shastri	M.Sc.	Assistant Professor	Organic Chemistry	27	-
Dr. S.S. Ratnaparkhi	M.Sc., D.H.E., M.Phil., Ph.D.	Associate Professor	Physical Chemistry	27	-
Dr. V.R. Shastry	M.Sc., D.H.E., Ph.D., FICCE, PGDEM	Associate Professor	Physical Chemistry	27	-
Dr. C.M. Mishra	M.Sc., Ph.D.	Associate Professor	Analytical Chemistry	22	-
Dr. D.S. Pimple	M.Sc., Ph.D.	Assistant Professor	Inorganic Chemistry	19	-
Dr. R.S. Dubey	M.Sc., Ph.D.	Assistant Professor	Inorganic Chemistry	15	02
Dr. A.D. Sawant	M.Sc., Ph.D.	Assistant Professor	Analytical Chemistry	17	-
Dr. V. Sridhar	M.Sc., M.Phil., Ph.D. SET	Assistant Professor	Inorganic Chemistry	12	-
M.D. Medhi	M.Sc., SET	Assistant Professor	Organic Chemistry	15	-
Dr. C. R. Vatsa	M.Sc., Ph.D.	Assistant Professor	Inorganic Chemistry	11	-
D.S. Borse	M.Sc.	Associate Professor	Organic Chemistry	24	-
Dr. M. Bhattacharya	M.Sc., Ph.D.	Assistant Professor	Analytical Chemistry	06	-
P.P. Kamble	M.Sc., NET, SET	Assistant Professor	Organic Chemistry	08	-
J.D. Girase	M.Sc., SET	Assistant Professor	Organic Chemistry	08	-
Dr. A.Y. Mokal	M.Sc., Ph.D.	Assistant Professor	Organic Chemistry	03	-
P.S. Babu	M.Sc., M.Tech.	Assistant Professor	Inorganic Chemistry	02	-
A.A. Kadam	M.Sc., NET	Assistant Professor	Organic Chemistry	02	-
Dr. S.K. Divekar	M.Sc., Ph.D., NET, SET	Assistant Professor	Physical Chemistry	01	-

11. *List of senior visiting faculty/Guest:*

Nil

12. *Percentage of lectures delivered and practical classes handled (programme wise) by temporary faculty:*

Nil

13. *Student-Teacher Ratio (programme wise):*

120:1

14. *Number of academic support staff (technical) and administrative staff sanctioned:*

- 04 Lab Assistants
- 13 Lab Attendants
- 02 Peon

15. *Qualifications of teaching faculty with DSc/ D.Litt/ Ph.D/ M.Phil./ P.G.:*

Ph.D.: 11
M.Phil.: 03
M.Sc.: 10

16. *Number of faculty with ongoing projects from a) National b) International funding agencies and grants received:*

03 (University of Mumbai)

17. *Departmental projects funded by DST-FIST; UGC, DBT, ICSSR, etc. and total grants received:*

- DST: Rs. 16.908 lakhs
- UGC: Rs. 1.23 lakhs
- University of Mumbai: Rs. 1.48 lakhs

18. *Research centre/ facility recognized by the University:*

01

19. *Publications:*

(Publication per faculty)

Number of papers published in peer reviewed journals (national/ international) by faculty and students

Dr. R.S. Dubey

- R.S. Dubey (2009) Corrosion Inhibition of 304 stainless steel in sodium chloride ciproflacin and norfloxacin. Indian Journal of Chemical Technology, vol.16, pp 334-338.
- K.U. Singh and R.S. Dubey (2012) Effect of 4-amino-N,N-dimethylaniline on corrosion inhibition in sulphuric acid medium, Int. J. Chem. ISSN 2249 – 2119,Vol 1 No.3, pp 366-373.
- R.S. Dubey and K.U. Singh (2012) Effect of Clopidogrel on Corrosion inhibition of Mild Steel in 1M H2SO4, Asian Journal of Chemistry, Vol.24, No. 4 pp 1759-1764.
- R.S. Dubey, Ajay Kaparwan, K.U. Singh and Nitin Singh (2012) Electrochemical Studies of 1,5-Diphenyl hydrazide; Asian Journal of Chemistry, Vol.24, No. 5
- R.S. Dubey and Yogesh Potdar. Control of microbiologically influenced corrosion of mild steel by using nanostructured polyaniline. Accepted, M.S. No. 11964/2011, Asian Journal of Chemistry.
- R.S. Dubey and K.U. Singh, The role of telmisartan as corrosion inhibitor for mild steel in sulfuric acid, Accepted, M.S. No. 11980/2011, Asian Journal of Chemistry.
- R.S. Dubey. Bioremediation of Hexavalent Chromium (Cr6+) from Industrial Effluents. International J. of Science, manuscript no. IJES/13/080, under review.

Dr. A.D. Sawant

- Sawant A., Lokhande R.S. and Barhate V.B. (2007) Extractive Spectrophotometric determination of Palladium(II) with 2- Hydroxy-5-methyl -3-nitro acetophone oxime. Research Journal of Chemistry and Environment, Vol. 11 (2).
- Sawant A., Lokhande R.S. and Barhate V.B. (2009) Extractive Spectrophotometric determination of Nickel(II) with 2- Hydroxy-5-methyl -3-nitro acetophone oxime. Research Journal of Chemistry and Environment, Vol. 13 (2).
- Sawant A., Lokhande R.S. and Barhate V.B. (2010) Extractive Spectrophotometric determination of Cobalt(II) with 2- Hydroxy-5-methyl -3-nitro acetophone oxime. Journal of Indian Council of Chemists Chemistry and Environment, 11 (2).
- Abhay Sawant (2011). Advanced thin layer chromatographic (TLC) methods. Centum, Vol. 1. Issue 1.
- Abhay Sawant (2011). Experimental determination of Faraday constant and Avogadro's number of electrochemical method, Vol. 1 (3).
- Abhay Sawant (2012). Extractive Spectrophotometric determination of Cobalt (II) with 2,2'4,4'-Tetrahydroxy benzophenone oxime (THBO). International Journal of basic and Applied Research, Vol. 3 (32-34).

Dr. Vaishnavi Sridhar

- Vaishnavi Sridhar, J.K. Verma and Sanjukta A. Kumar (2009) Selective separation of copper and nickel by solvent extraction using LIX 984N, Hydrometallurgy 99, 124-126.
- Vaishnavi Sridhar, J.K. Verma and Nyoti S. Shenoy (2010) Separation of nickel from copper in ammoniacal/ ammonium carbonate solution using Acorga M5640 by selective stripping, Minerals Engineering, 23, 454-456.
- Vaishnavi Sridhar and J.K. Verma (2011) Extraction of copper, nickel and cobalt from the leach liquor of

manganese – bearing sea nodules using LIX 984N and Acorga M5640, Minerals Engineering 24, 959-962

- Vaishnavi Sridhar and J.K. Verma (2012) Recovery of copper, nickel and zinc from sulfate solutions by solvent extraction using LIX 984N, e-journal of Chemistry

Books Written:

P.T. Singh

- Co-authoured two books, 'Organic Chemitry' and 'Synthetic Dyes' for T.Y. B.Sc. published by Seth Publications Ltd., Mumbai. first Edition, Jun3 2010.

20. *Areas of consultancy and income generated:*

Dr. R.S. Dubey acts a consultant for Asiant Paints for a nominal fee.

21. *Faculty as members in*

Senate: Nil
Board of Studies: 01
Syllabus Committee: 03

22. *Student projects*

a. Percentage of students who have done in-house projects including inter departmental/ programme:
100%

b. Percentage of students placed for projects in organizations outside the institution i.e.in Research laboratories/ industry/ other agencies:
1%

23. *Awards/ Recognitions received by faculty and students:*

- Dr. S.K. Divekar received Best Teacher Award by Dr. G.D. Pol Foundation in July 2012 for Innovative teaching .
- Dr. R.S. Dubey received Best Paper award in an International Conference in Central University of Gujarat on 14th and 15th March 2013.

24. *List of eminent academicians and scientists/ visitors to the department:*

Nil

25. Seminars/ conferences/ workshops organized & the source of funding:

- State level workshop for supporting staff on 'Safety in Laboratories' in collaboration with BASF. February 2013
- Workshop for M.Sc. Analytical Chemistry for new credit based semester system in collaboration with BOS, University of Mumbai. April 2013

26. *Student profile programme/ course wise:*

Year	Applications received	Selected	Enrolled		Pass percentage
			M	F	
		T.Y. B.Sc.			
2012-13	127	127	59	68	53%
2011-12	103	103	59	44	61%
2010-11	117	117	59	58	52%
2009-10	102	102	50	52	85%
		M.Sc.			
2012-13	Admission through University of Mumbai	6	1	5	83%
2011-12		10	4	6	75%
2010-11		8	3	5	62%
2009-10		7	2	5	85.7%

27. *Diversity of Students:*

Name of the Course	% of students from the same state	% of students from other states	% of students from abroad
F.Y. B.Sc	95	5	-
S.Y. B.Sc	100	-	-
T.Y. B.Sc	100	-	-
M.Sc.	100	-	-

28. *How many students have cleared national and state competitive examinations such as NET, SLET, GATE, Civil services, Defense services etc.?*

Data not available

29. *Student progression:*

Student progression	Against % enrolled
UG to PG	50%
PG to M.Phil.	Data not available
PG to Ph.D.	5%
Ph.D. to Post-Doctoral	Data not available
Employed • Campus selection • Other than campus recruitment	100%
Entrepreneurship/ Self-employment	1%

30. *Details of Infrastructural facilities:*

a. Library: 3282 Books (+ books in central library)
b. Internet facilities for Staff & Students: Available
c. Class rooms with ICT facility: Available
d. Laboratories: 5

31. *Number of students receiving financial assistance from college, university, government or other agencies:*

Two chemistry students have received DST Inspire Award. For others assisited financially, refer Annexure IX (pg. 264).

32. *Details on student enrichment programmes (special lectures/ workshops/ seminar) with external experts:*

Chem Bond - It is a chemistry department association and the activities are organized "by the students and for the students". Various activities are organized throughout the year like essay competition, group presentations, poster presentation and talk on the spot. The response from the students of all the classes is always excellent. Every year in the month of June, two days workshop is organized on GLP and Green Chemistry for T.Y.B.Sc. students. Guest lectures by eminent speakers are also organized to guide and motivate to students.

Name	Topic	Year
Dr. C. Nimkar, Sandoz India Ltd.	Quality Assurance	2009
Film Screening	Fire Fighting	2009
Dr. Nilesh Chatterjee	Career in Chemistry	2012
Dr. Sunil Bhagwat, ICT, Mumbai		2010
Dr. S. Durani, IIT, Mumbai	Stereochemistry	2010
Dr. Anil Thaker, Pharma Chem Dept.	"Career options after T.Y.B.Sc."	2011
Dr. Anil Bhardwaj. ONGC	"Chemistry and Industry"	2011
Dr. Prabodh Chobe. GM, BASF India Ltd.	How do I make my career more rewarding?	2011

33. *Teaching methods adopted to improve student learning:*

- Aptitude test
- Remedial classes
- Basic course classes (for advanced learners)
- Regular evaluation of both theory and practicals
- Arranging lectures for time management
- Bridge course
- Maitra scheme (Mentorship): Each teacher mentor takes care of 7 to 8 students and helps in their all-round personality development.
- ICT training to students

34. *Participation in Institutional Social Responsibility (ISR) and Extension activities:*

- Two staff members are active members of the college NSS unit and carry out large number of activities through NSS.
- One staff member initiated the extension unit of the college and undertakes various programs like Annapurna project, status of women in the society, ICT, road beautification etc.

35. *SWOC analysis of the department and future plans:*

- Strengths:

Largest number of students in F.Y. B.Sc, S.Y. B.Sc, T.Y. B.Sc in Mumbai University and largest number of staff members in the Chemistry department. Maitra scheme for T.Y. B.Sc students. Dedicated staff members.

- Weakness:

Space constraint. No additional teacher for postgraduate work.

- Opportunities:

Department has been trying to generate funds through research work in the field of corrosion. Dr. R.S. Dubey has been in contact with various industries for the collaboration, which may generate funds for department/college.

- Challenges:

Since a large number of students join technical/ medical colleges after STD. XII, it is a challenge to teach chemistry for below average students.

- Future Plans:

To extend the knowledge of Chemistry and its application to the society.