Evaluative Report of the Department

- 1. Name of the Department: Department of Geology, Centre of Advanced Study
- 2. Year of establishment: 22 January, 1923
- 3. Is the Department part of a School/Faculty of the university? Yes, Faculty of Science
- 4. Names of programmes offered (UG, PG, M.Phil., Ph.D., Integrated Masters; Integrated Ph.D., D.Sc., D.litt., etc.)
 - a) Three Years B.Sc. (Hons.)
 - b) Three Years M.Sc. (Tech.)
 - c) Two Years M.Sc. Petroleum Geosciences
 - d) Ph.D.
- 5. Interdisciplinary programmes and departments involved: Research work in various disciplines of interdisciplinary nature involves active participation of other departments of the university.
- 6. Courses in collaboration with other universities, industries, foreign institutions, etc.: Nil
- 7. Details of programmes discontinued, if any, with reasons: Nil
- 8. Examination System: Annual/Semester/Trimester/Choice Based Credit System: Semester

 System
- 9. Participation of the department in the courses offered by other departments: Faculties of the department render their services to the courses run by the other departments like Department of Geophysics, Department of Botany.
- 10. Number of teaching posts sanctioned, filled and actual (Professors/Associate Professor/Asst. Professors/others)

| | Sanctioned | Filled | Actual (including CAS & MPS) |
|--------------------------------|------------|--------|------------------------------|
| Professor | 05 | 04 | 12 |
| Associate Professors | 11 | 06 | 03 |
| Asst. Professors | 21 | 12 | 04 |
| Others | | | |
| (K.D. Malaviya Memorial Chair) | 01 | 01 | 01 |

11. Faculty profile with name, qualification, designation, area of specialization, experience and research under guidance

| Name | Qualification | Designation | Specialization | No. of Years | No. of Ph.D./M.Phil. |
|-----------------------|---------------|-------------|-----------------------|--------------|-------------------------|
| | | | | of | students guided for the |
| | | | | Experience | last 4 years |
| Prof. M. Joshi | M.Sc., Ph.D. | Professor | Metamorphic, | 29 Years | 1 completed |
| | | | Structure & Tectonics | | 3 in progress |
| Prof. H.B. Srivastava | M.Sc., Ph.D. | Professor | Structural Geology | 32 Years | 4 in progress |
| Prof. Satyendra Singh | M.Sc., Ph.D. | Professor | Economic Geology | 35 Years | Nil |
| Prof. M. P. Singh | M. Sc., Ph.D. | Professor | Coal & Organic | 35 years | 2 completed |
| | | | Petrology | | 4 in progress |

| Prof. A.K. Jaitly | M.Sc., Ph.D. | Professor | Invertebrate Paleontology | 35 Years | 1 in progress |
|-------------------------------|-------------------|-------------------------|--|--|------------------------------|
| Prof. Rajesh K. Srivastava | M.Sc., Ph.D. | Professor | Igneous Petrology and Geochemistry | 29 Years | 1 completed 2 in progress |
| Prof. B. P. Singh | M. Sc., Ph. D. | Professor | Sedimentology | 27 years | 6 in progress |
| Prof. Arun Deo Singh | M. Sc., Ph. D. | Professor | Micropaleontology, Paleoceanography & Paleoclimatology | 23 years | 1 awarded 5 in progress |
| Prof. R.P. Singh | M.Sc., Ph.D. | Professor | Environmental Geochemistry, Hydrogeology and Structural Geology | 30 Years | Nil |
| Prof. U.K. Shukla | Ph.D. | Professor | Sedimentology | 21 years | 2 completed 3 in progress |
| Prof. H.P. Sengupta | M.Sc., Ph.D. | Professor | Economic Geology, Sedimentary Petrology, Petroleum Geology and Mineralogy. | 28 years | 1 in progress |
| Prof. P. K. Singh | M. Sc., Ph.D. | Professor of Geology | Coal & Organic Petrology | 21 Years (Teaching 7 Years and Industrial Experience 7 Years) | 3 in progress |
| Dr. B. Pandey | Ph.D. | Assoc. Prof. | Stratigraphy and Invertebrate Paleontology | 25 years (Teaching 9.5 Years) | 02 in progress |
| Dr. N.V. Chalapathi Rao | Ph.D. | Associate Professor | Igneous Petrology & Geochemistry | 22 years | 6 in progress |
| Dr. V. Srivastava | M.Sc., Ph.D. | Associate Professor | Structural Geology & Tectonics, Remote Sensing & GIS | 17 Years | 2 completed 1 in progress |
| Dr. D. Prakash | M.Sc., Ph.D. | Assistant Professor | Metamorphic Petrology and Mineralogy | 17 Years | 3 in progress |
| Dr. P.P. Ghosh | Ph.D. | Assistant Professor | Physical Geology, Crystallography, Optical Mineralogy, Geomorphology, Remote Sensing and GIS | 10 Years | 1 in progress |
| Dr. A.S. Naik | Ph.D. | Assistant Professor | Coal and Petroleum Geology | 10 Years | Nil |
| Dr. Kuldeep Prakash | Ph.D. | Assistant Professor | Remote Sensing and GIS | 08 Years | 4 in progress |

- 12. List of senior Visiting Fellows, adjunct faculty, emeritus professors
 - a. Emeritus Professor: Prof. M.S. Srinivasan, FNA, FTWAS
 - b. ONGC KD Malaviya Chair: Prof. Jokhan Ram
- 13. Percentage of classes taken by temporary faculty-programme-wise information

| B.Sc. | M.Sc. (Tech.) | M.Sc. Petroleum Geosciences |
|-------|---------------|------------------------------|
| Nil | Nil | 100% (Self-Financing Course) |

14. Programme-wise Student Teacher Ratio

| Programme | No. of Students | No. of Teachers | Ratio |
|---|-----------------|-----------------|-------|
| B.Sc. | 446 | 19 | 1:23 |
| M.Sc. (Tech.) + M.Sc. Petroleum Geosciences | 162 | 19 | 1:9 |

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

| | Sanctioned | Filled | Actual |
|----------------------|------------|--------|--------|
| Technical Staff | 21 | 14 | 14 |
| Administrative Staff | 04 | 03 | 03 |

- 16. Research thrust areas as recognized by major funding agencies: (i) Paleontology, Stratigraphy & Paleoceanography, (ii) Basin Analysis & Energy Resources (iii) Petrology & Tectonics[as recognized by UGC under SAP Programme]
- 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, project title and grants received project-wise:

Number of faculty with ongoing projects = 08

- (a) National = 21 Projects
- (b) International = Nil
- (c) Total Grants Received = Approximately 3 Crores

Project Details:

| 1. | ISRO-GBP sponsored project on "Monsoon variability in the southeastern Arabian Sea during | |
|-----|---|--------------|
| | the last glacial and Holocene periods based on high resolution foraminiferal and pteropod | Dr. Arun Deo |
| | record" 2009-2013 (15.43 Lakhs). | Singh |
| 2. | NCAOR, MoES sponsored project "Mediterranean Outflow Water (MOW) paleoceanography | |
| | and its impact on global climate during the last 3 M.y" since 2013 (~ 8.17 Lakhs) | |
| 3. | DST sponsored project on "Ammonoid-Sequence-Magneto-Stratigraphic integration in the | Dr. B. |
| | Kachchh Jurassic" (Collaborative Research Project with NGRI, Hyderabad) (35.3 Lakhs) | Pandey |
| 4. | CSIR sponsored project on "Bio and sequence stratigraphic implications of Late Jurassic | |
| | ammonoids in Spiti Himalaya, India." (11 Lakhs) | |
| 5. | DST sponsored project on "Petrogenesis of the lamproites from the Ramagundu area, NW | Dr. N.V.C. |
| | margin of the Cuddapah basin, Southern India" (21.83 Lakhs) | Rao |
| 6. | DST sponsored project on "Petrogenesis of lamprophyres from the Deccan Large Igneous | |
| | Province, NW India" (Rs. 20 Lakhs) | |
| 7. | DST sponsored project on "Reconstruction of Paleogene Sedimentary record of the western | |
| İ | Himalayan Foreland basin in a sequence stratigraphic framework (39.6 Lakhs) | Dr. B.P. |
| 8. | DST sponsored project on "Lithofacies and biofacies analysis of Lower Tertiary Sequences of | Singh |
| | Imphal Valley, (23.33 Lakhs) | |
| 9. | CSIR sponsored project on "Paleoproterozoic Alkaline Mafic-Ultramafic Lamprophyric Rocks | |
| | Associated with the Mahakoshal Supracrustal Belt, Central India: Petrological, Geochemical | |
| | and Tectonic Significance (4.77 Lakhs) | |
| 10. | ISRO-PRL Sponsored project on "Petrogenesis of Asteroidal Achondritic Basalts of HED | Dr. R.K. |
| | clan: constraints from their petrological and electron microprobe studies" (2.76 Lakhs) | Srivastava |
| 11. | DST sponsored project on "Petrology, geochemistry and geochronology of distinct dyke rocks | |
| | of Damodar valley, east Gondwana basin, eastern India" (19.22 Lakhs) | |
| | | |

- Chapters in Books: 13
- Edited Books: 11
- ❖ Books with ISBN with details of publishers
- 1. Srivastava, Rajesh K. (2011). Dyke Swarms: Keys for Geodynamic Interpretation. Springer-Verlag, Heidelburg, 605p. ISBN 978-642-12495-2
- 2. Srivastava, Rajesh K., Ch. Sivaji and Chalapathi Rao, N. V. (2008). Indian Dykes: geochemistry, geophysics, and geochronology. *Narosa Publishing House Pvt. Ltd., New Delhi*, 650p. ISBN 978-81-7319-877-9
- 3. Sharma, V. and Srinivasan, M.S. (2007). Geology of Andaman-Nicobar: The Neogene; Capital Publishing Company, New Delhi, 163 p. ISBN 81-85589-58-5.
- ❖ Number listed in International Database (For *e.g.* Web of Science, Scopus, Humanities International Complete, Dare Database International Social Sciences Directory, EBSCO host, etc.): **149**
- ❖ Citation Index range / average: 150-500/(Average for five years: 200+
- **❖** SNIP
- **❖** SJR
- ❖ Impact Factor range / average: 0.49-8.1 / 4.0
- ❖ h-index: 08
- 23. Details of patents and income generated
- 1. Two patents have been applied for. The applications are in Patent Office, Delhi Branch, Govt. of India, Boudhik Sampada Bhavan, Dwarka, New Delhi. These are:
 - (a) 'Removal of toxic trace metals from coal with mixed Bacterial consortia comprising of Ralstonia sp and Pseudoxanthomonas sp' (P. K. Singh, Asha Lata Singh, A. Kumar and M. P. Singh)
 - (b) Desulfurixation of coal with Ralstonia sp and Pseudoxanthomonas sp (Asha Lata Singh, P. K. Singh, A. Kumar and M. P. Singh)
 - 24. Areas of consultancy and income generated
 - 1. Coal Petrology, Rs. 42,000.00
 - 25. Faculty selected nationally / internationally to visit other laboratories / institutions / industries in India and abroad:

| 1. | Internationally selected to Participate in the International Integrated Ocean | Prof. A.D. Singh |
|------------------|---|------------------|
| | Drilling Programme (IODP) 339 on Mediterranean Outflow, 2011-2012 (Being first | |
| | from the Indian Universities since India became member of the IODP). | |
| 2. | IODP Post Expedition Meeting at Bremen University, Germany (on deputation by | Prof. A.D. Singh |
| | the NCAOR, Goa, Ministry of Earth Sciences), 2012. | |
| 3. | Visiting Scientist Fellowship under Royal Society UK-DST India Science Networks, | Prof. A.D. Singh |
| | 2006-2007. | |
| $\overline{4}$. | Humboldt Fellowship | Dr. N.V.C. Rao |
| 5. | DAAD Fellowship | Dr. A.S. Naik |
| 6. | JSPS Invitation Fellowship | Dr. D. Prakash |

26. Faculty serving in

a) National committees b) International committees c) Editorial Boards d) any other (please specify): 16

| 1. | Editorial Board, International Journal of Ocean and Oceanography. |
|-----|---|
| 2. | National Executive Council, Earth Science India (ESI). |
| 3. | Executive Council, The Society of Earth Scientists, India. |
| 4. | Editorial board, Journal of Himalayan Geology |
| 5. | Editorial board, Journal of Geology & Mining Research |
| 6. | Editorial Board, Journal of the Geological Society of India |
| 7. | Editorial Board, Indian Journal of Geology |
| 8. | Editorial Board, Journal of Applied Geochemistry |
| 9. | National committee on Hydrothermal deposits programme of Ministry of Earth Sciences |
| 10. | Editorial Board, Journal of "Disaster Advances" |
| 11. | Council of the Geological Society of India, Bangalore. |
| 12. | Council of the Geological, Mining and Metallurgical Society of India, Kolkata. |
| 13. | Council of the Indian Society of Applied Geochemists (ISAG), Hyderabad. |
| 14. | IGCP-510: Global correlation of A-type granite |
| 15. | Editorial Board, International Open Mineralogy Journal. |
| 16. | Editorial Board, Editorial Board, DCS News Letter. |
| 17. | Research Advisory Committee, Wadia Institute of Himalayan Geology, Dehradun. |

27. Faculty recharging strategies (UGC, ASC, Refresher / orientation programs, workshops, training programs and similar programs).: **02**

| 1. | 3 rd Refresher Course in Earth Sciences (Interdisciplinary), organized at the Academic Staff College, |
|----|--|
| | Banaras Hindu University during Jan 4-24, 2011. |
| 2. | National Workshop on "Paleontology & Stratigraphy: Basics to Applications" organized at the Department |
| | of Geology, Banaras Hindu University during Feb. 27-28, 2011. |

28. Student projects

- \bullet percentage of students who have done in-house projects including inter-departmental projects: 100%
- percentage of students doing projects in collaboration with other universities/industry/institute: Nil

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

| 1. | Senior Alexander von Humboldt Fellowship (in recognition of scientific and academic | |
|-----|---|--|
| | excellence)Alexander von Humboldt Foundation, Bonn, Germany 2009 | |
| 2. | ISAG Medal (for outstanding contributions in geochemical studies related to the Mineral Resources from | |
| | 1999-2009)Indian Society of Applied Geochemists (ISAG), Hyderabad 2010 | |
| 3. | Fellow of Andhra Pradesh Akademy of Science, Andhra Pradesh Akademy of Sciences, Hyderabad 2011. | |
| 4. | Dr. Coggin J Brown Memorial Gold medal (for outstanding contributions to the Geosciences) by the | |
| | Mining, Geological and Metallurgical Society of India, Kolkata, 2012. | |
| 5. | Fellow of the Indian academy of Sciences (FASc), Indian Academy of Sciences, Bangalore, 2012. | |
| 6. | Fellow of the Indian Academy of Sciences (FASc), Bangalore 2011. | |
| 7. | Prof. M. R. Srinivasa Rao Award 2008 by the Geological Society of India, Bangalore. | |
| 8. | Chairmanship of Technical Session in Intl. Conference of PAGES & 4 th Open Science Meeting, Goa, | |
| | 2013 | |
| 9. | Chairmanship of Technical Session in DST & CSIR sponsored brain-storming Workshop on Goals of | |
| | Solid Earth Geosciences in India in the next decade", Kharagpur, 2012. | |
| 10. | Expert Member (on invitation by the IODP-India, MoES) to the International Workshop on scientific | |
| | proposal for the Indian Ocean Drilling by the IODP, 2011 | |
| 11. | Chairmanship of Technical Session in the Natl. Conf. on "Quaternary geological processes", | |
| | Lucknow, 2009. | |
| 12. | Chairmanship of Technical Session in the Natl. Conf. on "Earth System processes & Disaster | |
| | Management", Goa, 2009. | |

- Doctoral / post doctoral fellows
- Students
- 1. N.L. Sharma Gold Medal (for B.Sc.)
- 2. La Touche Medal (for M.Sc.)
- 3. M.S. Srinivasan Medal (for M.Sc.)
- 4. Rajnath Medal (for M.Sc.)
- 5. M.N. Mehrotra Medal (for M.Sc.)
- 6. Dehadrai Medal (for M.Sc.)

(Every year students with first rank in various branches of Geology receive the above listed medal / awards instituted in the department)

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

National: 08

International: 01

| 1. | National | Symposium on "The Planet Earth: Its Finite Resources and Human Civilization", March |
|----|----------|---|
| | <u> </u> | 2009 source of funding – Ministry of Earth Science. |
| 2. | National | Workshop on "Palaeontology and Stratigraphy: Basics to Applications", February, 2011 |
| | | source of funding- CSIR and CAS Scheme of the Department |
| 3. | National | National seminar on recent advances and future prospects in Geochemistry and Geophysics: the Indian scenario (February, 2012) funded by UGC, BHU, CSIR, MOES & DST. |
| 4. | National | National Seminar 'Problems in Indian Geology: Retrospect and Prospect', Oct. 6-7, 2010, Varanasi. |

| 5. | National | DST sponsored Field Workshop on "Mafic dyke swarms of the Dharwar craton", 15 th to 18 th July 2008, Department of Geology, Bangalore University, Bangalore |
|----|---------------|--|
| 6. | National | National Seminar on Geodynamics and Metallogenesis of the Indian Lithosphere, 22 nd to 24 th September, 2011, Centre of Advanced Study, Department of Geology, Banaras Hindu University, Varanasi. |
| 7. | National | Workshop on Preparation of high-quality thin sections of rocks and their petrographic interpretations, 25 th September, 2011, Centre of Advanced Study, Department of Geology, Banaras Hindu University, Varanasi. |
| 8. | National | National Seminar on Recent advances and future challenges in Geochemistry and Geophysics: the Indian scenario, 22 nd to 24 th February, 2012Centre of Advanced Study, Department of Geology, Banaras Hindu University, Varanasi. |
| 9. | International | 6 th International Dyke Conference, 4 th to 7 th February 2010, held at Varanasi, India. |

31. Code of ethics for research followed by the departments:

Code of ethics are being strictly followed

32. Student profile programme-wise:

| Name of the Programme | Applications | Selected | | Pass percentage | |
|-----------------------------|--------------|----------|--------|-----------------|--------|
| (refer to question no. 4) | received | Male | Female | Male | Female |
| M.Sc. (Tech.) | 53 | 42 | 11 | 100% | 100% |
| M.Sc. Petroleum Geosciences | 06 | 05 | 01 | 100% | 100% |
| Ph.D. | 28 | 20 | 08 | - | - |

33. Diversity of students

| Name of the Programme (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 |
|---|--|--|---|------------------------------------|
| M.Sc. (Tech.), M.Sc. Petroleum Geosciences | 62.26% | 5.66% | 32.08% | Nil |
| Ph.D. | 50% | 14% | 36% | Nil |

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

More than 60% of our PG students qualify for NET/SET/GATE and UPSC Geologists examinations.

35. Student progression

| Student progression | Percentage against enrolled | |
|---|-----------------------------|--|
| UG to PG | 62.26% | |
| PG to M.Phil. | N.A. | |
| PG to Ph.D. | 50% | |
| Ph.D. to Post-Doctoral | 5% | |
| EmployedCampus selectionOther than campus recruitment | 50% - 60% 30% - 40% | |
| Entrepreneurs | | |

36. Diversity of staff

| Percentage of faculty who are graduates | | |
|--|-----|--|
| of the same university | 72% | |
| from other universities within the State | 07% | |
| from universities from other States | 21% | |
| from universities outside the country | 00 | |

- 37. Number of faculty who were awarded M.Phil., Ph.D., D.Sc. and D.Litt. during the assessment period
 - 1. Dr. P. Ghosh Awarded Ph.D.
 - 2. Dr. A.S. Naik Awarded Ph.D.
- 38. Present details of departmental infrastructural facilities with regard to

| a) | Library | : Yes |
|----|--|-------|
| b) | Internet facilities for staff and students | : Yes |
| c) | Total number of class rooms | : 06 |
| d) | Class rooms with ICT facility | : 06 |
| e) | Student's laboratories | : 12 |
| f) | Research laboratories | : 12 |

- 39. List of doctoral, post-doctoral students and Research Associates:
 - a) from the host institution/university

| A. | Doctoral Students |
|-----|-----------------------------|
| | |
| 1. | Sri Ali Adnan |
| 2. | Sri Praveen Chandra Singh |
| 3. | Km. Vibha Katiyar |
| 4. | Km. Anju Verma |
| 5. | Sri Bishwadeep Kumar Panwar |
| 6. | Km. Komal Verma |
| 7. | Km. Tanu Shukla |
| 8. | Sri Vijay Kumar Singh |
| 9. | Sri Pramod Kumar Rajak |
| 10. | Sri Ashutosh Kumar |

| 11. | Sri Vineet Kumar Srivastava |
|-----|---------------------------------------|
| 12. | Sri Saurabh Singh |
| | |
| 13. | Km. Tanuja Mohanty |
| 14. | Sri Amitava Patra |
| 15. | Km. Suparna Tiwari |
| 16. | Sri Sumit Jaiswal |
| 17. | Sri Susheel Kumar |
| 18. | Km. Krishna Mondal |
| 19. | Sri Mrityunjay Chaturvedi |
| 20. | Sri Santanu Bhattacharya |
| 21. | Km. Shilpi Rai |
| 22. | Km. Gargi Sharma |
| 23. | Sri Ravindra Kumar |
| 24. | Sri Shyam Kanhiya |
| 25. | Km. Kanchi Chaubey |
| 26. | Sri Prem Prakash |
| 27. | Sri Birja Prasad Das |
| 28. | Sri Amiya Kumar Samal |
| 29. | Sri Tapash Mahajan |
| 30. | Sri Sudeep Pal |
| 31. | Sri Debojit Talukdar |
| 32. | Sri Awadhesh Kumar |
| 33. | Sri Jagdeep Pandey |
| 34. | Km Pradeepika Kaushik |
| 35. | Sri Omnath Saha |
| | |
| B. | Research Scientists |
| | Sri Gulab Chand Gautam |
| | · · · · · · · · · · · · · · · · · · · |

b) from other institutions/universities

| | Doctoral Students | Name of University |
|-----|-----------------------------|--|
| 1. | Sri Abhishek Kumar Singh | Birbal Sahni Institute of Paleobotany, Lucknow |
| 2. | Sri Alok Kumar | Geological Survey of India, Kolkata |
| 3. | Km. Bandana Dimri | Birbal Sahni Institute of Paleobotany, Lucknow |
| 4. | Km. Debarati Nag | Birbal Sahni Institute of Paleobotany, Lucknow |
| 5. | Km. Madhushree Mandal | Geological Survey of India, Kolkata |
| 6. | Km. Pallavi Priya | Central Mining and Fuel Research Institute, Dehradun |
| 7. | Sri Prashant Sahebrao Dhote | Geological Survey of India, Kolkata |
| 8. | Sri Rajesh Asthana | Geological Survey of India, Kolkata |
| 9. | Sri Rajesh Kumar Srivastava | Keshav Dev Malviya Institute of Petroleum Exploration, Oil and |
| | | Natural Gas Corporation, Dehradun |
| 10. | Km. Ruchika Bajpai | Birbal Sahni Institute of Paleobotany, Lucknow |
| 11. | Sri Vikram Partap Singh | Birbal Sahni Institute of Paleobotany, Lucknow |
| 12. | Sri Randheer Singh | Birbal Sahni Institute of Paleobotany, Lucknow |

- 40. Number of post graduate students getting financial assistance from the university: Nil
- 41. Was any need assessment exercise undertaken before the development of new programme(s)? If so, highlight the methodology. Yes, Feedbacks from faculties members, students and industries were taken into account.

- 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? Yes, Effectively
 - b. students on staff, curriculum and teaching-learning-evaluation and how does the department utilize the feedback? Yes, Effectively
 - c. alumni and employers on the programmes offered and how does the department utilize the feedback? Yes, Effectively
- 43. List the distinguished alumni of the department (maximum 10)
 - 1. Dr. A.G. Jhingaran, FNA
 - 2. Dr. C. Karunakaran, D.G., GSI
 - 3. Prof. K.K. Mathur, FNI
 - 4. Prof. Rajnath, FNI
 - 5. Prof. I.C. Pandey, FNA
 - 6. Prof. S.S. Merh, Baroda University
 - 7. Prof. K.K. Singh, Ex. V.C. Gwalior University.
 - 8. Prof. K. B. Powar, Ex. V. C. Kolhapur University.
 - 9. Shri T.M. Mahadevan, Ex-Director AMD, Hyderabad.
 - 10. Dr. Anil Kumar Gupta, FNA, Director Wadia Institute of Himalayan Geology
- 44. Give details of students enrichment programmes (special lectures / workshops / seminar) involving external experts.
 - ❖ Every year the department organized 'Geology Day' on its foundation date i.e. October 6 and on this occasion a distinguished Earth Scientist is invited to deliver K. K. Mathur Memorial Lecture for the students.
 - Department organizes frequently special lecture series and workshops for the benefit of the students and the research scholars.
- 45. List the teaching methods adopted by the faculty for different programmes.
 - Through black-board teaching
 - Through power point presentation
 - Through field excursions
- 46. How does the department ensure that programme objectives are constantly met and learning outcomes are monitored?
 - Work reports of the assigned work given to the students under various teaching & research programs are constantly and strictly reviewed by the department.
 - Periodic revision of the course curricula.
- 47. Highlight the participation of students and faculty in extension activities.

Faculty members of the department have been active in delivering extension lectures and organizing various academic activities including field excursions. Students participate in various academic competitions organized by other institutions.

48. Give details of "beyond syllabus scholarly activities" of the department.

Department has been frequently organizing series of lectures by the eminent scientists within the country and also abroad.

- 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.

The Department is unique in the country in having competent and distinguished faculties in almost all branches of core subjects of Geology. In the Department researches are pursued by self-organized research groups. A very large number of problems of varied interest, inclusive of those related to the society (energy, mineral and ground water resources, climate change) having been studied from the geological perspectives by different research groups. Many of the faculty members worked abroad with the leading experts of the famous Departments/Institutes of from different countries, which equipped them with the latest developments in respective branches of Geology and imparting their update knowledge to their students. Research activities in the department almost encompass the entire Indian region from the Himalayas to southern India and from Orissa to Gujarat and surrounding seas and other world's ocean basins.

51. Details five major Strengths, Weaknesses, Opportunities and Challenges (SWOC) of the department.

Strengths:

- 1. Dynamic faculty members with diverse specialization
- 2. Faculty Members with International Exposure.
- 3. High quality research as evident by publication
- 4. Strong teaching capability
- 5. Uniqueness in having three years M.Sc. (Tech.) and one specialized PG course in Petroleum Geosciences.

Weakness:

- 1. Department is running short of faculty members
- 2. Lack of sufficient State of Art advance instruments.

Opportunities & Challenge:

- Geology has a major role to play to meet the challenges posed by natural hazards, climate change and environmental issues.
- ❖ The department can generate manpower with State of Art knowledge / skills, essential in exploring new energy resources and help in their potential utilization.
- 52. Future plans of the department.
 - Our future impetus shall be focused mainly on energy resources, environmental change and water.
 - ❖ The department would strengthen the existing courses and would like to open-up few new courses and develop infrastructure at par with International Centre of Earth Sciences to meet the challenges posed by the crisis pertaining to energy, environment and water.