Annual Quality Assurance Report (AQAR) of Internal Quality Assurance Cell of Nagpur Shikshan Mandal’s Shri Mathuradas Mohota College of Science, Nagpur (M.S.) For 2010-2011

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Annual Quality Assurance Report (AQAR)
of
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INTERNAL QUALITY ASSURANCE CELL
(From 11.01.2011 onwards)

Chairperson:
Dr. S. G. Charalwar, Principal

Members from Management:
Shri R. B. Khanzode, Vice president, NSM
Shri Sudhir Baheti, Secretary, NSM
Dr. T.S.V. Naidu, Jt. Secretary, NSM

Teachers:
Dr. I. M. Sarin, Vice Principal
Shri R. P. Deshpande        Shri A. S. Muktibodh
Dr. A. A. Fulzele           Mrs. U. R. Sonparote
Dr. S. G. Goswami           Shri J. A. Janbandhu

Non-teaching Member:
Shri V. D. Tekade

Nominee from Local Society
Dr. D. J. Shrikhande        Mrs. P.S. Jog

Member Secretary:
Mrs. G. N. Tumbde
Section A

Plan of action chalked out by the IQAC in the beginning of the year towards quality enhancement.

1. Reaccreditation of the college
2. Proposals for different schemes from UGC
3. To organize seminars and workshops
4. Promotion of research activities
5. Upgradation of library
6. Inter collegiate activities[ under cluster of colleges]
7. Formation of anti-ragging committee
8. Good practices through Women s cell, NSS, NCC
9. Upgrading the sports facilities
Section B

Details in respect of the following

1. Activities reflecting the goals and objectives of the institution.

   Activities carried out during 2010-11

   - Admissions as per Govt. rules
   - Formation of various committees

   18-6-2010- courtesy visit of Dr. S.S. Shrikhande famous mathematician from USA

   19-6-2010- Meeting of Vice principal and HODs with the principal to plan for academic session

   24-6-2010- Tree plantation program

   29-6-2010-College council meeting

   3-7-2010-QAC meeting

   22-7-2010- Visits to all departments to check the preparation of departments for peer team visit

   24-7-2010- Chhatrasamvad

   30-7-2010-placement screening tests for Radio Mirchi

   31-7-2010- i. Parents meeting

      ii. Alumni meeting

   7-8-2010- Chemical society inaugural function

   9-8-2010- Steering committee meeting

   12-8-2010- Geological society inaugural function
13-8-2010 - Women’s cell inauguration

16-6-2010 - Language and Arts society inauguration.

17-8-2010 - Zoological Society Inauguration.

26-8-2010 - Physics Society Inauguration.

29-8-2010 - Arrival of NAAC PEER team.

30-8-2010 -

31-8-2010 - Visit of NAAC PEER team to the college.

01-9-2010

10-9-2010 - Awareness of Traffic Rules with Lions Club & Jana Akrosh.

14-9-2010 - Hiking Club Inauguration.

24-9-2010 - Formation of Legal Aid Cell & Awareness of Anti-Ragging Laws

By Dist. & Session Judge Shri. Shukre.

29-9-2010 - Farewell to Mrs. A. V. Dange.

30-9-2010 - D. Laxminarayana Day.

02-10-2010 - Gandhi Jayanti Celebration Chief Guest Dr. Kishor Mahabal

14-10-2010 - One Day National Bio-Geo Seminar Chief Guest Dr. S. R. Wate.

18-10-2010 to 17-11-2010 - Winter Vacations and Winter Examination.

4-1-2011

5-1-2011 - Annual Social Day

6-1-2011

11-1-2011 - QAC Meeting

14-1-2011 - Physical efficiency test.
20-1-2011  National Seminar on  Environment and Human rights.
   In collaboration with NEERI
26-1-2011  Republic Day  Participation in Cultural Activities.
30-1-2011  Sad-Bhavana Daud
28-2-2011  National Science Day Chief Guest Vice Chancellor Dr. V. S. Sapkal,
   Guest of Honour Dr. M .K.N. Yenki, Registrar RTM Nagpur Uni.
08-3-2011  Women s Day Celebration with Health Check up camp.
19-3-2011 - Building Committee meeting.
05-3-2011  QAC meeting

2. New academic programmes started (UG and PG) --- Nil
3. Innovation in curricular design and transaction

   The college is affiliated to RTM Nagpur University. The syllabus is
   prescribed by the University as per the guidelines of UGC. The Senior College staff
   members participate in the workshops held for modification of syllabus, give their
   valuable suggestions for upgrading of syllabus as per the need of local students.
   Some of the teachers are the members of the board of studies in the University.

4. Interdisciplinary programmes started. --- Nil
5. Examination reforms implemented.

   The examinations are conducted by RTM Nagpur University in annual
   pattern. However college conducts unit tests, test examinations, internal practical
   tests, annual practical examinations for continuous assessment of students. The
   slow learners are identified and the remedial classes are conducted for them.
   College also has a mentor system.

6. Candidates qualified : NET / SLET / GATE etc. ---Nil
7. Initiative towards faculty development programme.
The teachers are encouraged to attend orientation, workshops, seminars on regular basis. Mrs. U.R. Sonparote, HOD, Zoology department has submitted her Ph.D work under FIP programme. College has organized various guest lectures of resource persons for the benefit of the staff. Health checks up camps are organized for the staff. Computer awareness programmes are organized.

8. **Total number of seminars / workshops conducted**:

Seminars 02, Workshops 02.

**Seminar 1.**
Department of Botany organized one day national seminar funded by UGC on 14th October 2010 in collaboration with Department of Geology

**NATIONAL SEMINAR**
ON
**RECENT TRENDS IN BIOGEO SCIENCES**

350 Participated in the National seminar, Out of which 130 were student participants. 30 research posters were presented by participant.

During four technical session internationally renowned scientist delivered talks on various recent aspect of Bio-Geo Sciences.

Seminar was inaugurated by the hands of Dr. Satish R. Wate, Director NEERI. He talks about **Role of Environmental Impact Assessment in Environmentally Sustainable Developments**.

First plenary lecture was delivered by Prof. C. Manoharachary, Professor Emeritus, Osmania University, Hyderabad on the topic **Biology to Biotechnology some glimpses**.

Second plenary lecture was on **Remote sensing and its application** was delivered by Dr. Y.B. Katpatal, VNIT, Nagpur.

Third plenary lecture was delivered by Dr. R.D. Makde, Senior Scientist, BARC, Mumbai. On the topic **The Ran GTP gradient GPS inside a cell**.

Valedictory function: Chef Guest was Dr. A.K. Chatterjee, Director, GSI, Nagpur.
Souvenir and proceedings was published during inauguration of seminar.

Seminar 2.

NATIONAL SEMINAR
ON
ENVIRONMENT AND HUMAN RIGHT

On 20\textsuperscript{th} January 2011 a UGC sponsored Seminar on Environment and Human Rights was held in Nagpur Shikshan Mandals Shri Mathuradas Mohota College of Science in technical collaboration with National Environmental Engineering Research Institute (NEERI), Nagpur.

Dr Satish Wate, Director of NEERI alumna of the college was the Chief Guest at the inaugural function and delivered a key note address on Role of stakeholders consultation for socioeconomic consideration in developmental projects in India.

The second lecture was delivered by Dr. Thrity D. Patel, Professor Emeritus Law. She emphasized legal provisions made to protect the environment. In the third lecture Dr. Snehal Fadnavis, Principal of Shri Govindrao Wanjari Law College guided the learned audience on Right to Environment International perspective. The concluding lecture was delivered by renowned Scientist from NEERI Dr. K. Krishnamurthi who extensively covered the aspect of toxic exposure relating to human right issues.

This symposium with a valedictory functions in which Shri. Ramesh Khanzode emphasized that the individuals must remember his duties in addition to his rights in order to protect the environment.

Workshop 1.

On
Rescues Generation for Biological Olympiad

1. From 16\textsuperscript{th} to 18\textsuperscript{th} June 2010. Rescues Generation for Biological Olympiad

Indian Association of Teachers of Biological Sciences (IATBS), Department of Botany of Shri M.Mohota College of Science, Dharampeth M.P. Deo Memorial Science College and Sponsored by Indian Association of Physics Teachers have jointly organized a three day workshop on Rescues Generation for Biological Olympiad held at S.M. Mohota College of Science Nagpur. Teachers from Mumbai, Delhi and from other parts of the state attended the workshop. All
participants were involved in generation of Questions Bank for Biology Olympiad at National and International level. Dr. P.G. Kale general Secretary of IATBS guided in the workshop.

**Workshop 2.**

**Environmental Pollution due to Thermal power stations**

Environmental Studies Society of S.M. Mohota College of Science and National Power Training Institute, Nagpur jointly organized a one day seminar on Environmental Pollution due to Thermal power stations. Seminar was inaugurated by Dr. Moghe, Sr. Scientist, NEERI, Nagpur. Speaking on the occasion chief guest Dr. Moghe enlightened the students, staff members and non-teaching staff about the Environmental Assessment and Impact. The another speaker Shri H.M. Emmanuel delivered lecture on Environmental pollution due to thermal power stations and the key role played by NPTI to solve the problem of environmental pollution by thermal power stations.

9. **Research Projects :**

   a. **Ongoing 15**

   Dr. J.N. Ramteke: UGC sponsored Minor research project, Ultrasonic Investigation of Binary and Ternary Liquid Mixture.

   b. Dr. D.V. Nandanwar: UGC sponsored Minor research project Synthetic Characterization and Study of some conducting Polymers.

   c. Dr. M.S. Atone: UGC sponsored Minor research project Effect of P-Doping in rare Earth Activated CaSO4 Phosphor.


   e. Mr. V.V. Soman: UGC sponsored Minor research project Effect of Dopant on Structural and Thermodynamic Properties of Polymers.

   f. Mr. Nilesh D. Meshram: -EMR: An Approach to the health informatics using ATM-R Facility

   g. Dr. M.B. Bhagat: Calcareous algae from Wadhawan Formation (Cenomanian to Turonian) of Surendranagar district, Saurashtra, and their implications on palaeoenvironment.
h. S. T. Rathod, UGC sponsored Minor research project, Smarandache Notions.

i. Mr. Jagdish Janabandhu: UGC sponsored Research project Bernard Malmud: The Representation of Moral values in his Novels is ongoing.


k. Mrs. R. S. Saha & Dr. D. J. Shrikhande: Study of bio-efficacy of *Paecilomyces lilacinus* for the management of Root Knot Nematode of Brinjal.

l. Dr. S. Sakhare: Economically viability of recycling and by product recovery from textile industry in Nagpur.

m. Mrs. G.N. Tumbde: Effect of dopent on polymers.

n. Dr. C.B. Masram: Analytical studies of some organic systems.

o. Dr. M.G. Dhonde: Synthesis and characterization of different catalysis material and its environmental application.

**Research Project completed - 09**

10. **Patents generated if any --- Nil**

11. **New collaborative research programmes.**

   MRP of Dr. S. S. Sakhare with Dr. N. S. Raman. Dy. Director NEERI.

12. **Research grants received from various agencies**

   Rs. 18,00,000/-

13. **Details of Research Scholars**

   **ongoing Ph.D. work :-**

   ➢ Mr. V.V. Soman: Study of Modified PMMA-PVC blend System.

   ➢ Mr. N. D. Meshram: EMR: An Approach to the health informatics using ATM-R Facility.

   ➢ Prof. S.P. Joshi: Effects of water conservation structures, Seloo Taluka of Wardha district.
Submitted Ph.D. work :-


Awarded Ph.D.

Dr. Ms. R.S.Saha Dept of Zoology

Research Papers (12)

a. Mr.V.V.Soman DC Electrical conduction properties of Gamma irradiation of PMMA, PVC and their blends Published in the proceedings of international symposium on Materials education held at Pune from 26-28 March 2011.

P. K Dubey, Ashok Kumar, Yudhisther Kumar, Reeta Gupta and Deepa Joshi, Primary measurement of total ultrasonic power with improved accuracy in RF voltage measurement, Review of Scientific Instruments (AIP, USA), Vol. 81(10), 104904 (2010).


Renu Maurya, P. K. Dubey, B. C. Arya and S. L. Jain, Characterization of Aerosols and PBL using Micro Pulse Polarization LIDAR at New Delhi, INDIA, Communicated to Atmospheric Chemistry and Physics

1. Biostrigraphical and palaeobiogeographical assessment of fossil calcareous algae subterranniphylum from Middle Eocene, Bassein Formation, Bombay Offshore basin, India. - Dr. M.B.Bhagat


ii) Open problem on Infinite Camina Groups by A.S Muktibodh, Dr. S. H. Ghate, published in Kourovka Notebook-17 of world unsolved problems in group theory published by Russian Academy of Sciences in the issue of 2010.

14. Citation index of faculty members and impact factor

Shri. A. S. Muktibodh h-index-2 g-index-3

15. Honours / Awards to the faculties: National and International

16. Internal resources generated

College infrastructure is made available for various examinations such as IIT, NDA, NET, SET, UPSC, M PSC, Bank Examinations etc.

17. Details of departments getting assistance/ recognition under SAP, COSIST, DSP, FIST and other programmes ---Nil
18. Community services

- Tree plantation programme in collaboration with Masonic group.
- Blood Donation programme by NSS Conducted by Dr. Ravi Wankhede and Team.
- Participation in ‘Sadbhavana Daud’ (International Marathon) organized by NMC to convey the message of peace, Chief Guest - Divisional Commissioner Nagpur.
- World AIDS day Chief Guest Health Minister, Dean Govt. Medical College. Members from nearby society also participated at the health check up camp organized by the college.

19. Teacher and Non-teaching staff newly recruited

20. Teaching Non-teaching staff ratio 30:51

21. Improvement in Library service

- Automation in Library is completed.
- LDC TV with DVD and educational CDs are installed.
- Xerox machine is available in Library.
- Effects of water conservation structures, Seloo Taluka of Wardha district by A separate reading room for the staff members.

22. New books / Journals subscribed and their values
   Rs. 2,80,000/-

23. Courses in which student assessment of teachers and the action taken on student feedback.
Feed back from students is obtained for all the subjects. A suggestion box is kept in college premises. Based on the feed back, the teachers are taken in confidence and they are guided for the improvement.

24. **Feedback from stakeholders**
   Feed back from alumni and parents are taken. Their valuable suggestions are incorporated for the benefit of the institute.

25. **Unit cost of education** Rs. 61,000/- per student
   Including salary

26. **Computerization of administration and the process of admissions and examination results, issue of certificates:**
   Yes

27. **Increase in the infrastructural facility**
   Development of research laboratory in the department of Zoology, and Department of Chemistry.

28. **Technology upgradation**
   Latest Softwares are purchased
   V-sat learning facility is available.

29. **Computer and internet access and training to teachers, non-teaching staff and students.**
   Computer and internet access is available in office, in all the departments, library. The staff and students are trained on regular basis.

30. **Financial aid to students.**
    A) Scholarships as per government rules and regulations to backward students.
B) Following Prizes and Awards are instituted in the college:

a. Late Mandakini Bhurley and Late Smt. Sushila Naidu Memorial prize: -
   For getting highest marks in B.Sc. examination

b. Late Mutatkar Memorial and Shri P. W. Mokahsi Prize: -
   For Highest Marks in Mathematics

c. Late S. S. Purohit and Shri S. S. Khot Memorial Prize:
   For Highest Marks in Geology

d. Late S. L. Shinde and Late M. J. Pahade Memorial Prize:
   For highest marks in Botany

e. Murkute Memorial Prize and Umabasi Vaidya memorial Prize: -
   For Highest marks in Chemistry (1st Prize)

f. Chitale Memorial Prize: -
   For Highest marks in Chemistry (2nd Prize)

g. Bapurao Maharaj Khatkhedkar Memorial Prize: -
   For Highest Marks in Physics

h. Late Kashibai Murhar Memorial Prize: -
   Highest Marks in Zoology

i. Late Indumati Ramanujam Naidu Memorial Prize: -
   For highest marks in Electronics

j. Late Ramabai Deshpande Memorial Award: -
   For Poor and Needy student

k. Shri V. R. Pande Prize: -
   Cash Prize for ward of non-teaching staff.

31. Activities and support from Alumni association.

Following members of alumni association delivered a guest lecturer:

1. Dr. Sanjiv Choudhari  Bone density and its importance
2. Dr. S. R. Wate- Environmental impact assessment
3. Dr. Y. A. Murkute  Awareness about Geology and its scope

Activities and support from Parent Teacher Association

Parent teacher association meetings are organized.
32. **Health services**

Compulsory medical tests for the students, Sickle Cell detection camp, BMI / BMR detection camp, First Aid Box in laboratories and office. Doctor on call is available (Dr. Rajiv Trivedi - alumna of the college)

33. **Performance in sports activities**

34. **Incentive to outstanding sports persons**

**Students achievements and awards**

I. Ms. Jasmin Gaikwad  First prize Inter collegiate singing competition
II. Shri. Amit Mandve  --- First Prize Inter collegiate debate competition
III. Shri. Nilesh Sontakke-Third Prize Inter Collegiate essay competition
IV. Shri W. Kolankar  --First Prize Inter collegiate seminar.
V. Students had actively participated in Inter collegiate seminars , essay competition, debate completion, Science quiz, poster competition, GK test, sports activities, organized by other colleges. They take part in activities arranged by NSS and NCC.

35. **Activities of the Guidance and Counseling Unit**

Following guest lectures were organized for the benefit of students.

Why students commit suicide ?  By Dr. Pramod Bhake

Effect of Optimistic Thinking  By Mr. Rohit Patne

What did I get from this college  By Ms. Preeti Lokhande

Nothing remains impossible  By Ms. Reena Sangpal
36. **Placement services provided to students.**

37. **Good practices of institution**


II. Formation of Hiking Club.

**Hiking Club**

- Report -

Inauguration of Hiking Club 2010-11 was done by Hon’ble Principal. Dr. S. G. Charalwar, S. M. M. College of Science on 14\(^{th}\) Sept. 2010.

Mr. Rahul Sarode (B.Sc.III) and Ms. Ashwini Katuane (B.Sc.III) were appointed as President & Secretary respectively.

1. Hiking Club activity is aimed at arousing interest in students about visiting different places especially by walking.

2. A video show of Annular Solar Eclipse, which occurred on 15\(^{th}\) Jan 2010 was arranged for the students.
3. At the time of inauguration a slide show entitled ‘Mera Bharat Mahan’ was also arranged. It contained about 150 photographs of various places in India, showing rich cultural heritage, variety of landscapes, ancient places, caves, painting, temples etc.

III. Women Cell Report (2010-11)

Inauguration Ceremony of women cell for 2010-11

The inauguration ceremony of the women cell 2009-10 was held on 13th August, 2010 at the hands of Dr. Mrs. A. A. Saoji ex. Director, Institute of Science, Nagpur. On this occasion, Dr. Mrs. Saoji delivered an interesting and informative lecture on ‘Global warming and sustainable development’. She elaborated and discussed the threats of global warming and also replied too many queries raised by the audience.

Participation of the students in Sickle cell screening camp

Students along with Dr. Mrs. Rina Saha, (Department of Zoology) were sent for the sickle cell screening camp conducted by Regional Hemoglobinopathy Detection and Management Center, Indira Gandhi Medical College, Nagpur on 15-10-2010.

International Women’s Day celebration

100th International women’s day was celebrated on 8th March 2011 with great enthusiasm by. Wellness Evaluation Camp was organized in which on this occasion, Body Mass Index, Visceral fat, Trunk fat, Muscle fat, BMR, Body age etc parameters were analyzed by machine-Karada scan by health consultants. 80 persons including teaching and non-teaching staff members, students as well as family members of non-teaching staff got benefited by this camp.

Health consultants Miss Neha Bhange, Priyanka Kandalkar, Mr. Patekar and Mr. Naresh Wankhede of Herbalife International thoroughly described everyone’s report and advised participants in a very cool and scientific way.
IV. Study tours for students to
   1. Khekra Nala
   2. Koradi Thermal Power Station
   3. WCL Umrer
   4. Sericulture RTM Nagpur University
   5. Visit to Patgowari dolomite mine

v. Project by students:
   Students collected Air Samples in and around college premises and analysed them and the report is submitted to the principal.

   With NEERI, Nagpur.

39. Action taken report on the AQAR of the previous year.

40. Any other relevant information the institution wishes to add.
Section C

Outcome achieved by the end of the year

1. College was reaccredited by NAAC, in B grade. The PEER team visited college on 30th, 31st August and 1st September 2010. PEER team also gave valuable suggestions for the further development of college.

2. College has sent following proposals to UGC for sanction.
   i) Revised plan for ladies hostel.
   ii) Sports complex.
   iii) For the equipments in sport department.
   iv) Grant for Additional Assistance of Rs. 25 lakhs.

3. College has organized two national seminars and two workshops.

4. More research activities in the college

5. Automation of library was completed the college has subscribed new books and journals worth Rs. 2,80,000/-

6. Various inter collegiate activities were carried out under cluster of colleges `Indradhanu.

7. Anti-ragging Committee is formed. Information banners are displayed in the college.
Section D

Plans of the HEI for the next year (2011-12)

1. Implementation of suggestions by NAAC

2. Promotion of more research activities including the major research projects

3. Modifications in the infrastructure.

4. To organize more seminars and workshops.

5. Activities with alumni association and parents association.

6. Regular internal test examinations unit wise.

7. To arrange more guest lecturers of resource persons from various fields.

8. More students activities like visit to industries.

Mrs G.N.Tumbde                                      Dr.S.G Charalwar

Coordinator                                      Principal /chairman

IQAC
To
The Director,
National Assessment and Accreditation Council,
2/4 Rajkumar Road, P.O. Box No. 1075,
Rajajnagar, Bangalore 560 010.

Respected Sir,

I am sending herewith the Annual Quality Assurance Report (AQAR) of the IQAC for the year 2010-11.

Thanking you,

(Dr. S. G. Charalwar)
PRINCIPAL,
S. M. M. College of Science
Nagpur