BIODATA

Prof. Dr. Janardhan Namdeo Nehul

Associate Professor and Head,

Department of Botany,

In-Charge, Faculty of Science,

Dadapatil Rajale Arts, Commerce and Science College,

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Dist- Ahmednagar, MS, (India) 414502.

Educational Qualification – M.Sc. B.Ed. Ph.D. F.A.P.S.

Date of Birth -1st June 1969

Teaching Experience- 31 Years

Research Experience- 19 Years

Educational Qualification

Exam	Year	University	Class
B.Sc.	April 1990	University of Pune	First Class with Distinction
M.Sc.	May 1992	University of Pune	First Class
B.Ed.	April 1996	University of Pune	First Class
Ph.D.	11 July 2011	University of Pune	Biotechnology (Cyanobacteria)

Ph.D. Topic-Studies on Isolation, Biomass Production and Biological Activity of Some Species of Cyanobacteria.

Positions Holding-1. Head Department of Botany, Dadapatil Rajale Arts, Commerce and Science College, Adinathnagar, Tal-Pathardi, Dist- Ahmednagar, 414505, MS, India.



2. In-Charge, Faculty of Science, Dadapatil Rajale Arts, Commerce and Science College, Adinathnagar, Tal-Pathardi, Dist- Ahmednagar, 414505, MS, India.

Date of Joining- 15 th September 1992

Specialization-1. Mycology and Plant Pathology. 2. Cyanobacteria

Membership/Recognition-

- 1. Recognised guide by Savitribai Phule Pune University for M.Phil. & Ph.D.
- 2. Post Graduate Teacher recognized by the University of Pune.
- 3. Fellow of the Academy of Plant Sciences, India.
- 4. Life member of Indian Science Congress Association, Kolkata.
- 5. Life member of the Academy of Plant sciences, Muzaffarnagar, India.

Research Projects Completed

- **1.** Minor Research Project funded by UGC, New Delhi completed during 2008-2010. Title "Development and screening of *Scytonema* species for enhanced production of bioactive secondary metabolites"
- 2. Minor Research Project funded by UGC, New Delhi completed during 2011-2013. Title "Collection, isolation, biomass production and biological activity of *Westiellosis* species"

Books Written/Co-Authored

- 1.Plant Physiology and Biochemistry (T. Y. B.Sc., SPPU, Pune) July 2015, Success Publication, Pune. ISBN-978-93-5158-484-1
- 2. Plant Morphology and Anatomy (F. Y. B.Sc., CBCS, SPPU, Pune) July 2019, Success Publication, Pune. ISBN-978-93-89066-36-4.
- 3. Plant Anatomy and Embryology (S. Y. B.Sc. CBCS, SPPU, Pune) June 2020, Success Publication, Pune. ISBN-978-93-24457-37-2.
- 4. Plant Physiology (S. Y. B.Sc. CBCS, SPPU, Pune) June 2020, Success Publication, Pune. ISBN-978-93-87020-55-9.
- 5. Algae and Fungi (T.Y. B.Sc. Sem-V BO 351, CBCS, SPPU, Pune) June 2021, Success Publication, Pune. ISBN-978-93-24457-5-1.
- 6. Advances in Plant Science Volume III (ISBN: 978-93-91768-51-5) January 2022, Chapter-Biodiversity of Cyanobacteria of Some Regions of Ahmednagar District of

Maharashtra State, India PP 66-75 (Bhumi Publishing, Nigave Khalasa, Kolhapur 416207, Maharashtra, India)

Awards Received-

- 1.Received State Level Top Academic Achievement Award (R&D) 06-02-2019. The Award has been given by Bhimathadi Education Society, Daund, Dist-Pune, Maharashtra for contribution to Academic and research work.
- 2. Received prestigious National Level Shishak Ratna Award 25-04-2021 for achievements and services rendered to the field of education. The award has been given by Samata Sahitya Academy, Yawatmal, Maharashtra, India, (Regd. No. F 12028 (Y).
- 3. Received State Level Shaikhnik Karyagaurav Award 2020-21 (May 2021). The Award has been given by Dnanoday Bahuuddeshiya sanstha, Takalibhan, (Regd. No. 600/2015) Tal- Shrirampur Dist-Ahmednagar, Maharashtra for contribution in Educational and Research work.

Research Guidance

Sr,No.	Name of the Candidate	Degree	Name of the Topic	Date of
				Registration
1	Vikhe Amol Chandrakant	Ph.D	Studies on Induction of	18/09/2018
			Mutation in Vigna	Awarded
			radiate(L)Wilzek Cultivar-	Ph.D. on
			Naval	16/03/2023
2	Ghadge Chandrkant Popat	Ph.D	Studies on Physiological	29/02/2020
			and Biochemical responses	
			in some cultivars of	
			Safflower(Carthamus	
			tinctorius L.) during salt	
			stress	
3	Gaikawad Suvarna	Ph. D.	Bioprospecting of	07/04/2022
	Venkatrao		Gymnosporia species from	
			semi-arid region of	
			Ahmednagar, Maharashtra	

Orientation and Refresher Courses Completed

Orientation Course	Academic Staff College, University of Pune	4 to 31-08-1999
Refresher Course	Ahmednagar College, Ahmednagar	10 to 29-06-2002
Refresher Course	Department of Botany, University of Pune	5 to 25-01-2005
Refresher Course	Academic Staff College, BAM U, Aurangabad	7 to 29-01-2014
Refresher Course	HRDC, BAMU, Aurangabad	18 to 30/11/2019

Faculty development programmes/Short Term Courses Completed

- 1. Completed 87 th Orientation Course for Programme Officers of NSS from 7th October to 16th October 2003 at NSS Training and Orientation Centre, Ahmednagar College, Ahmednagar.
- 2. Completed 60th Refresher Course on special themes, I. Life Skills for Adolescents and II. Water Literacy from 14th March to 18th March 2005 at NSS Training and Orientation Centre, Ahmednagar College, Ahmednagar.
- 3. Completed the "Soft Skills Development Programme for Trainers" organized by SPPU, Pune at New Arts, Commerce and Science College, Ahmednagar from 27-05-2007 to 05-06-2007.
- 4. Completed the Faculty Development Programme for Senior Faculty of Science" organised by HRDC, SPPU, Pune conducted at Ahmednagar College, Ahmednagar from 17-12-2014 to 22-12-2014.
- 5. Completed Faculty development programme on Introduction to computers" organised by NACS College, Parner with IIT, Bombay January 2020.
- 6. Completed Faculty development programme on Scilab Organised by Rajarshi Shahu Mahavidyalaya with IIT, Bombay from 01/05/2020 to 07/05/2020.
- 7. Completed Faculty development programme on Innovations to Academicians Organised by Ramchandra College of Engineering with Department of Science and Technology, Govt. of India from 11/05/2020 to 16/05/2020.
- 8. Completed Faculty development programme on the "data science using R and Geogebra "organised by Jamal Mohammad College, Tiruchirappalli with IIT, Bombay between 11-05-2020 to 14-05-2020.
- 9. Completed Faculty development programme on "Research Methodology-Tools and techniques" organised by IILM college of Engineering, Noida between 18-05-2020 to 22-05-2020.
- 10. Completed Faculty development programme on "ICT based tools and its applications in teaching learning process" organised by Educational Learning Centre, Nagpur between 27-05-2020 to 02-05-2020.
- 11. Completed Faculty development programme on" Transforming Education-The Google Classroom Way" organised by Aachi Institute of Management and Enterpreneual development, Chennai, between 01-06-2020 to 07-06-2020.

- 12. Completed Faculty development programme on "NAAC Assessment and Accreditation (A&A)" organised by Vinayakrao Patil Mahavidyalaya, vaijapur under UGC Paramarsh Scheme between 08-01-2020 to 13-06-2020.
- 13. Completed Faculty development programme on "Institutional Benchmarking of Best Practices" organised by shree Mallikarjun and Shri Chetan Manju Desai College, Canacona, Goa between 08-06-2020 to 14-06-2020.
- 14. Completed Faculty development programme on "Mathematics for Biological Sciences" Organised by HRDC, SPPU, pune conducted at Shardabai Pawar Mahila College, Shardanagar, Baramati, (Pune) between 15-06-2020 to 20-06-2020.
- 15. Completed Faculty development programme on "Tools for Online Teaching, Learning and Evaluation organised by SRTM University, Nanded between 01-07-200 to 06-07-2020.
- 16. Completed Faculty development programme on "New Trends in Higher Education: NEP 2020 and Pedagogical Transformation (Botany)" Organised by HRDC, SPPU, Pune, between 22-09-2020 to 28-09-2020.
- 17. Completed Faculty development programme on "Building Startup and Innovation Centres (Botany)" Organised by HRDC, SPPU, Pune, between 26-10-2020 to 30-10-2020.
- 18. Completed Short Term Course on Soft Skill Development organized by UGC-Human Resource Development Centre Gujarat University during 10/05/2021 to 16/05/2021.

Research Articles/ Papers Published in the International and National Journals

- 1. T.D.Nikam,S.G.Ghane,J.N.Nehul and R.B.Barmukh,2009 "Induction of morphogenic callus and multiple shoot regeneration in *Momordica cymbalaria*Fenzl". Indian Journal of Biotechnology, October 2009 PP 442-447.
- 2. J.N.Nehul and T.D.Nikam 2010 "Effect of NPK fertilizers and other chemicals on growth and biomass production in *Anabaena oryzae*Fritsch." Journal Flora and Fauna, Vol. Special Issue January 2010 pp113-115[ISSN-0971-6920].
- 3. J.N.NehulandT.D.Nikam 2012 "Growth and production of carotenoids in a cyanobacteriumStigonema dendroideumFremy. In different nutrient media" Applied Research and Development Institute Journal PDFARDIJ [Online] 2012, 4A; PP 1-6 (ISSN-2249-8354).

- 4. J.N.Nehul and T.D.Nikam2012"Cyanobacterial diversity of Bhandardara region of Ahmednagar District (MS India)". Journal BIONANOFRONTIER special Issue -9 August 2012, ECOREVOLUTION 2012 COLOMBO-SRILANKA, PP176-179 [ISSN-0974-0678].
- 5. J.N.Nehul and T.D.Nikam 2012 "Isolation, purification and biomass production of some members of Nostocales and Stigonematales" Applied Research and Development Institute Journal CODEN: PDFARDIJ [PRINT VERSION] Volume:5,)1, August 2012, ;PP 71-78 (ISSN-2249-8346).
- 6.J.N. Nehul and T.D.Nikam 2012"Cyanobacterial Diversity Of Shri Harihareshwa region of Pathardi Tehsil" Journal Applied Research And Development Institute Journal *PDFARDIJ [PRINT] NOV.2012*, 6 (8); (P) 72 76ISSN: 2249-8346.
- 7.J.N. Nehul and T.D. Nikam2012 "Influence of Culture Media on Growth and production Carotenoides in *Westiellopsis* prolifica Janet" Journal Advances in Plant Sciences, Vol-25- No.02(Dec.2012) PP-233-235.ISSN-0970-3586.
- 8.T.D. Nikam, J.N. Nehul, Y.R.Gahile, B.K.Auti, M.L.Ahire, K.M.Nitnaware, B.N.Joshi, N.Jawali, "Cyanobacterial Diversity in Western Ghat Region of Maharashtra, India" Journal Bioremediation, Biodiversity and Bioavailability-Global Science Books, PP-70-80.
- 9. J.N.Nehul and T.D.Nikam, 2013 "Antifungal Activity of Extracts from CyanobacteriumLyngbya bipunctataLemm." Journal Advances in Plant Sciences, Vol-26- No.01(June 2013) PP-17-19. ISSN-0970-3586.
- 10. J.N.Nehul and T.D.Nikam, 2013. "Antifungal Activity of Extracts from a Cyanobacterium *Scytonemaschmidtii* Janet." Journal of Recent Trends in Life Science, Vol-I- Issue-1 (Jul-Sept 2013) PP-59-64. ISSN-2320-754X.
- 11. J.N.Nehul and T.D.Nikam, 2013. "Antifungal Activity of Extracts from aCyanobacterium *Tolypothrix fragilis* Geitler." Journal Flora and Fauna, Vol-19- No.01 (2013) PP-300-302.ISSN-0971-6920.
- 12. J.N. Nehul, 2014 "Influence of Various Culture Media on Growth and Production of Carotenoids in a Cyanobacterium *Lyngbya bipunctata*Lemm." Journal Bioscience Discovery, Jan-2014.Vol-5 number-1 PP-60-63. ISSN -2229-3469.
- 13.J.N.Nehul,2014"studiesonantifungalactivityofacyanobacterium *Westiellopsisprolifica*ja net.." Journal Flora and Fauna, Vol. 20, No.12014 PP-79-81 ISSN-0971-6920.
- 14. J.N.Nehul 2016 "Growth and production of carotenoids in a Anabaena oryzae in different nutrient media" International Journal of Researches in Biosciences, Agriculture and Technology (ISSN-2347-517x).Issue-2, Vol-II, PP-97-99.

- 15. J.N.Nehul 2016 "Studies on growth and carotenoids in a cyanobacterium *Scytonematopsis kashyapi*" Journal Trajectory Volume 24 No.1 PP 51-58, ISSN- 0975-1165
- 16. J.N.Nehul 2017 "Influence of different growth media on growth and production of carotenoids in *Nostoc* species". Journal Flora and Fauna, Vol. 23(1), PP-208-211 ISSN-0971-6920.
- 17. J.N.Nehul 2017 "Antifungal Activity of a Cyanobacterium Westiellopsis prolifica". Journal Flora and Fauna, Vol. 23, No. 2(2) PP-208-211 ISSN-0971-6920.
- 18. J.N.Nehul 2018 "Studies on Effect of Various Culture media on growth and Carbohydrates Content of Westiellopsis prolifica Janet". Intrrnational Journal of Researches in Biosciences, Agriculture and Technology, IJRBAT, Vol-VI, February 2018, PP-221-224 eISSN-2347-517X
- 19. J.N.Nehul 2018 "Studies on Effect of Various Culture Media on Growth and Carbohydrates Content in a Cyanobacterium *Scytonema schmidtii* Gom."International Journal of Multidisciplinary Research, Volume IV, October 2018 PP 71-74 ISSN-2455-8499.
- 20. J.N.Nehul January 2019 "Estimation of Growth and Carbohydrates Content in a Cyanobacterium *Anabaena circinalis*" International Journal of Research and Analytical Reviews January 2019 PP ISSN-2348-1269.
- 21. J.N.Nehul Februry 2019 "Estimation of Carbohydrates Content in a Cyanobacterium *Nostoc calicicola*" International Journal Research Journy. Februry 2019 PP-103-106 ISSN-2348-7143.
- 22.J.N. Nehul June 2019 "Studies on Effect of Different Culture Media on Growth and production of carotenoides in a Cyanobacterium *Scytonema schmidtii* Gom." International Journal Research and Analytical Reviews, [VOLUME 6 | ISSUE 2 | June2019 ISSN-2348-1269.PP-640-642
- 23. A.C.Vikhe and J.N.Nehul 2020"Determination of LD50 value of Vigna radiate(L.) wilzek cultivar-Naval" Journal Advances in Zoology and Botany Volume 8(1):, January 2020 PP ISSN- 2331-5091 PP 6-11 CARE-List
- 24. J.N.Nehul 2020 "Studies on antifungal activity of a cyanobacterium Phormidium fragile Gomont." International Journal of Research and Analytical Review, Volume-7, Issue-1 PP 44-48 ISSN-2348-1269

- 25.J.N. Nehul February 2020, "Studies on growth and estimation of carotenoids in a cyanobacterium Camptylonema species" Journal Ecology and Fisheries, Volume 13, number-1 PP 84-87, ISSN-0974-6323.
- 26. A.C.Vikhe and J.N.Nehul April 2020"Effect of EMS,SA and gamma radiation on seedling development of Vigna radiata, Ahmednagar (m.S.) India. Journal Flora and Fauna, Volume 26 No.1 PP 79-87, ISSN-0971-6920
- 27.J.N. Nehul May 2020, "Assessment of antifungal activity of a cyanobacterium Calothrix javanica" International Journal of Researches in Biosciences and Agriculture Technology, Issue(VIII), Volume II PP 92-95, ISSN- 2347-517 X
- 28.Vikhe A & Nehul J August (2020) Studies on mutagenic sensitivity of Vigna radiata (L.) Wilczek. Tropical Plant Research Volume 7(2): 309–312]. E-ISSN:2349-1183 CARE-List
- 29. J.N. Nehul December 2020, "Analysis of Growth and Proteins in a Cyanobacterium Hapalosiphon welwitschii Forma" EDU CARE A Multidisciplinary International Peer Reviewed/Refereed Journal, Volume-IX, Number-5, ISSN: 2319-5282, PP 67-70.
- 30. Vikhe, A. C. and Nehul, J. N. March 2021, "Mutagenic Efficiency and Effectiveness of EMS, SA and GR on Vigna radiata (L.) Wilczek "World Journal of Current Scientific Research, Volume 1(1):76-80.
- 31. Nehul, J. N. March 2021, "Antibacterial Activity of a Cyanobacterium Calothrix javanica de Wilde "World Journal of Current Scientific Research, Volume 1(1):7-10.
- 32. Janardhan Namdeo Nehul April 2021, "Studies on Effect of Different Culture Media on Growth and Phycobilins Content in a Cyanobacterium Tolypothrix fragilis (Gardner) Geitler, International Journal of Latest Transactions in Engineering and Science (IJLTES), Volume 12 Issue 1,ISSN:2321-0605 PP 1-4.
- 33. Janardhan Namdeo Nehul April 2021, "Analysis of Growth and Carotenoids Content in a Cyanobacterium Aphanocapsa biformis" International Academic Journal of Applied Bio-Medical Sciences, Vol-2, Issue- 2 ISSN Print: 2709-328X | ISSN Online: 2709-3298. PP 13-15.
- 34. Janardhan Namdeo Nehul May 2021, "Influence of Different Media on Growth and Phycobilins in a Cyanobacterium Scytonema schmidtii, Gom. International Advanced Research Journal in Science, Engineering and Technology Vol. 8, Issue 5, May 2021, ISSN (Online) 2393-8021 PP 447-450.
- 35. Janardhan Namdeo Nehul, May 2021, "Measurement of Growth and Phycobilins in A Cyanobacterium Phormidium Fragile (Meneghini) Gomont" International Journal of

- Researches in Biosciences, Agriculture and Technology, I J R B A T, Issue (IX), Vol. II, May 2021: PP 140-145, e-ISSN 2347 517X
- 36. Janardhan Namdeo Nehul May 2021, "Evaluation of Antibacterial Activity of A Cyanobacterium Scytonema Schmidtii Gom.". Paripex Indian Journal of Research, May 2021 Volume 10 | Issue 05 | 1 | Print ISSN No. 2250 1991 | Doi: 10.36106/Paripex,PP 1-3.
- 37. Janardhan Namdeo Nehul June 2021, "Antineoplastic activity of the extracts from a Cyanobacterium Lyngbya bipunctata Lemm." International Research Journal of Plant Science (ISSN: 2141-5447) Vol. 12(3) pp. 01-4, June, 2021. CARE-List
- 38. Vikhe, A. C. and Nehul, J. N. June 2021," Effectof Mutagens (Ems, Sa And Gammaradiation) On Quantitative Parameters Of Vigna Radiata (L.) Wilczek, International Journal Of Researches In Biosciences, Agriculture And Technology, I J R B A T, Issue (Special-17), June 2021: 657-664. e-ISSN 2347 517X
- 39. Janardhan Namdeo Nehul, August 2021, Studies on Antibacterial Activity of a Cyanobacterium Tolypothrix fragilis (Gardner) Geitler, Journal Molecular Biology Open Access, (HILARIS), Volume 10:6, 2021, ISSN: 2168-9547, PP 1-4.
- 40. Janardhan Namdeo Nehul, September2021, Studies on Estimation of Growth and Phycobilins Content in a Cyanobacterium *Calothrix javanica* De Wilde, Wesleyan Journal of Research, Volume 14 No 25 September 2021, ISSN: 0975-1386 PP 49-56. CARE-List
- 41. Amol Chandrakant Vikhe and Janardhan Nehul, September 2021, Induced Mutations in Vigna radiata (L.) Wilczek, Journal Molecular Biology Open Access, (HILARIS), Volume 10: S3, 2021, ISSN: 2168-9547, PP 1-3.
- 42. Amol Chandrakant Vikhe and Janardhan Nehul, September 2021, Studies on Effect of Salinity Stress on Vigna radiata (L.) Wilczek Cultivar, Naval, Journal Molecular Biology Open Access, (HILARIS), Volume 10: S3, 2021, ISSN: 2168-9547, PP 1-4.
- 43. Balasaheb Neel, Janardhan Nehul Amol Chandrakant Vikhe, September 2021, Effect of Plant Extracts on Seed Borne Mycoflora in Zea mays L., Journal Molecular Biology Open Access, (HILARIS), Volume 10: S3, 2021, ISSN: 2168-9547, PP 1-2.

Papers Published in the Proceedings of the Conferences

1. J.N.Nehul and T.D.Nikam2012 "Cyanobacterial diversity from Mula canal area of Pathardi Tehsil of Ahmednagar" Proceeding of national conference on

- Biodiversity, Biotechnology and Climate Change at Arts, Commerce and Science College, Sonai, Tal-Newasa, Dist-Ahmednagar, NCBBC 2012(1)PP93-95 [ISBN-978-93-81921-23-4].
- 2.J.N. Nehul, 2013 "Growth and production of Carotenoides in a CyanobacteriumHapalosiphonwelwitschii Forma by Using Different Culture Media." New Vistas in plant Sciences and Biotechnology, ISBN 978-81-924820-4-0.
- 3.J.N. Nehul, 2013 "Cyanobacterial Diversity of Madhi Area of Pathardi Tehsil of Ahmednagar District (MS, INDIA)." New Vistas in plant Sciences and Biotechnology, ISBN 978-81-924820-4-0.
- 4.J.N. Nehul, 2013 "Cyanobacterial Flora of Shevgaon Tehsil ofAhmednagar District (MS, INDIA)." National seminar on Global Warming and its Effect on Biodiversity, December-2013.PP-30-33. ISBN 978-81-928760-0-9.
- 5.J.N. Nehul, 2013 "Effect of Various Culture Media on Growth and chlorophyll pigments in a Cyanobacterium *Oscillatoriobscura*." National seminar on Global Warming and its Effect on Biodiversity, December-2013.PP-74-77. ISBN 978-81-928760-0-9.
- 6.J.N. Nehul, 2014 "Studies on Growth and production of Carotenoides in a Cyanobacterium *Anabaena oryzae*." Proceeding of National Seminar on Advances in Plant Sciences for Sustainable Rural Development, C.T. Bora College, Dist-Pune, Sept.2014.ISBN 978-1-63415-707-0.
- 7.J.N. Nehul "Antifungal Activity of a Cyanobacteriummicrocoleuslacustris". Proceeding of International Conference on Environmental Issues and Sustainable Development, New Arts and Science College, Parner 18-20, October , 2014. ISBN 978-81-930154-07.
- 8.J.N. Nehul, 2016 "Effect of different nutrient media on growth and production of carotenoidesin Aulosira species." Proceeding of State level conference on Opportunities, Challenges and Prospect in Life Sciences, Shri Anand College, Pathardi, 2-3 February 2016. ISBN 978-93-5158-595-4. PP-1-5.

Papers Presented in International symposia, Conferences, Seminars, etc.

- 1. J.N.Nehul "Isolation, purification and biomass production of some members of Nostocales and Stigonematales." International Symposium on PhycologicalResearch, Banarus Hindu University, Varanasi, UP, Feb 25-27, 2010.
- 2.J.N.Nehul"AntifungalactivityofextractsfromcyanobacteriumLyngbyabipunctataLemm." World Congress For Man and Nature on GlobalClimate Change and Biodiversity Conservation, GurukulKangriUniversity, Haridwar, UK, Nov 11-13, 2011.
- 3. J.N. Nehul "Cyanobacterial diversity of Bhandardara region of Ahmednagar District (MS India)". International Conference on Environment and umanity, ECOREVOLUTION 2012 COLOMBO-SRILANKA, 18-20 August 2012.

- 4.J.N.Nehul"StudiesonGrowthandCarotenoidesinaCyanobacteriumScytonematopsiskashy apii". International Conference on Innovations in Energy, Polymer and Environmental Sciences, YahvantraoChavan Institute of Science, Satara,10-12 January,2014.
- 5.J.N. Nehul "Antifungal Activity of a Cyanobacteriummicrocoleuslacustris". International Conference on Environmental Issues and Sustainable Development, New Arts and Science College, Parner 18-20, October ,2014.
- 6. J.N.Nehul "Influence of different growth media on growth and production of carotenoids in *Nostoc* species". International Conference on Recent Trends in Life Sciences(ICRTLS), New Arts and Science College, Parner 29-30 December 2017.
- 7.J.N. Nehul "Studies on Effect of Various Culture Media on Growth and Carbohydrates Content in a Cyanobacterium *Scytonema schmidtii* Gom." International Conference on Innovations in Physical, Chemical and Life Sciences(IPCLS), New Arts, Commerce and Science College, Parner 27-28 December 2018.
- 8.J.N. Nehul "Studies on Effect of Various Culture Media on Growth and production of carotenoides in a Cyanobacterium *Scytonema schmidtii* Gom."International Conference on Recent Advances in Traditional Medicine, Medicinal Plants and Phytochemistry, Ahmednagar College, Ahmednagar .8-9 February 2019.
- 9.J.N. Nehul "Studies on antifungal activity of a cyanobacterium Phomidium fragile Gomont" International Conference NACS College, Ahmednagar (SPPU sponsored) 11-12 February 2020
- 10. J.N.Nehul, "Assesment of antifungal activity of a cyanobacterium Calothrix javanica dewilde. International Conference ASC College, Sonai (BOD.SPPU sponsored) 28-29 February 2020
- 11. J.N.Nehul, "Evaluation of Growth and Protein Content in Scytonema Schmidtii Gom.in Different Nutrient Media", International E- conference on Current Approaches in Life Sciences for Sustainable Development, Yashwantrao Chavhan Institute of Science, Satara, Maharashtra.19-20 March 2021.
- 12. J.N.Nehul, "Influence Of Different Media On Growth And Phycobilins In A Cyanobacterium Scytonema Schmidtii, Gom.".International Conference on Information Technology, Computing & Applications (ICITCA Online) organized by RSP Conference Hub, Coimbatore, India and Sreenidhi Institute of Science & Technology, Hyderabad, India. 6-7 May 2021.
- 13. J.N.Nehul, "Screening of a Cyanobacterium *Westiellopsis prolifica* Janet.for Antibacterial Activity ", International Conference on Emerging Global Trends in Agricultural, Biological and Pharmaceutical Sciences organized by BASE in association with College of Medicine, University of Hail, Saudi Arabia and Forest Research Centre for Eco-Rehabilitation ,Prayagraj, India 12-13 June 2021.

- 14. J.N.Nehul, "Measurement of growth and phycobilins in a cyanobacterium Phormidium fragile (Meneghini) Gomont, International Conference on Climate Change and Its Effect on Environment, Food & Society organized by ASC College, Sonai (BOD.SPPU sponsored) 15-16 June 2021.
- 15. J.N.Nehul, "Studies on Estmation of Growth and Phycobilins Content in a Cyanobacterium Calothrix javanica de Wilde, International Symposium on "New Trends in Science and Technology (NTST-2021)" organized by Internal Quality Assurance Cell (IQAC) and Faculty of Science, New Arts, Commerce and Science College, Parner, Dist. Ahmednagar, INDIA virtually held during 5 6 August, 2021.
- 16. J.N.Nehul, "Studies on Growth And Phycobilins in a Cyanobacterium Lyngbya Polysiphoniae, International Conference on Changing Perspective in Environment, Management, Humanities, Sciences and Technology held on 14th and 15th July 2022 jointly organized by Marathwada Sarvodaya Shikshan Prasarak Mandal's Lalbahadur Shastri Sr. College, Partur Dist. Jalna, MS. India Mula Education Society's Arts, Commerce & Science College, Sonai, Newasa Dist. Ahmednagar, MS. India & Yuvaraja's College Mysuru, Karnataka, India (Constituent Autonomous College with Potential for Excellence).

Papers Presented in National symposia, Conferences, Seminars, etc.

- 1. J.N.Nehul "Seed viability,germinability and transplantation studies in *Calotropis*" National Seminar on Plant Physiology,Department of Botany,University of Pune,MS, Dec 27-29,2004.
- 2...J.N. Nehul "Multiple shoot regeneration of callus in *Momordica cymbalaria* Fenzl." National Seminar on Plant Bioresource Utililization, Department of Botany, University of Pune, MS, Dec 26-27, 2007.
- 3. J.N.Nehul "Effect of NPK fertilizers and other chemicals on growth and biomass production in *Anabaena oryzae*Fritsch." National conference on Recent Trends in Botany, K.J.Somayya College ,Kopargaon,Dist-Ahmednagar,MS,Jan 28-30, 2010.
- 4. J.N.Nehul "Collection, isolation and purification of cyanobacterial flora of Bhandardara region of Ahmednagar District." National Conference on Recent Advances in Plant Sciences, Dr.Rafique Zakaria Womens College, Aurangabad, MS, December 3-4, 2010.
- 5'J.N.Nehul"AntifungalactivityofextractsfromCyanobacterium*Scytonemaschmidtii*Janet." National conference on Current Innovation in Plant Sciences, K.J.Somayya College ,Kopargaon,Dist-Ahmednagar, MS,Feb 5-7, 2011.

- 6. J.N.Nehul "Antifungal activity of extracts from cyanobacteriumTolypothrixfragilis (Gardner)." National Seminar on Plant Biodiversity for Sustainable Development, Department of Botany, University of Pune, MS, March 10-12, 2011.
- 7. J.N.Nehul "Influence of Culture Media on Growth and Production of Carotenoids in *Westiellopsis prolifica* Janet." National Conference on Recent Trends in Plant Sciences, T.C.College, Baramati, MS, Feb 3-5, 2012.
- 8. J.N.Nehul "Production of biomass as renewable source of energy in a cyanobacterium *Hapalosiphon welwitschii* Forma. Byusing NPKfertilizers.."National Conference on Green Engineering and Environmental Pollution, Jawarlal Nehru Engineering College Aurangabad, MS,Feb 10-11,2012.
- 9. J.N.Nehul "Growth and production of carotenoides in a cyanobacterium *Stigonema dendroideum* Fremy in different nutrient media." National Conference on Environmental Science, ShriDnyaneshwarMahavidyalaya, Newasa, Dist-Ahmednagar, MS, Feb 23-25, 2012.
- 10. J.N.Nehul "Cyanobacterial diversity from Mula canal area of Pathardi Tehsil of Ahmednagar" National conference on Biodiversity, Biotechnology and Climate Change at Arts, Commerce and Science College, Sonai, Tal-Newasa, Dist-Ahmednagar, NCBBC 26-28 July 2012.
- 11. J.N.Nehul "Effect of Different Media on Growth and Production of Carotenoides in *Westiellopsis prolifica* Janet" National conference on Ecostudies / Green studies: Perspectives from Literature, Life Sciences and Earth Sciences 2-3 February 2013.
- 12. J.N.Nehul "Influence of Culture Media on Growth and Chlorophyll Pigments in *Scytonema schmidtii* Gom" National Seminar on Advances in Plant Sciences Sciences, K.J.Somayya College ,Kopargaon,Dist-Ahmednagar, MS 28th February 01 st March 2013.
- 13. J.N.Nehul "Studies on isolation and biomass production in *Oscillatoria animalis*Ag. Ex Gomont" National Seminar on Recent Trends in Plant Sciences & Climate Change, SSGM College, Kopargaon, Dist-Ahmednagar, MS 22-23 rd March 2013.
- 14. J.N.Nehul "Influence of Various Culture Media on Growth and Production of Carotenoides in a Cyanobacterium Lyngbya bipunctata Lemm." National conference on Current Prospectus and Challenges in Life Sciences, NACS, College, Ahmednagar, MS,26-27 July,2013.

- 15. J.N.Nehul, "Cyanobacterial Diversity Of Madhi Area of Pathardi Tehsil of Ahmednagar District (MS, INDIA)." National Seminar on New Vistas in plant Sciences and Biotechnology NACS, College, Shevgaon ,Dist-Ahmednagar,MS, 2-3 August,2013.
- 16. J.N.Nehul "Antifungal activity of extracts from a cyanobacterium *Tolypothrix fragilis* Geitler." National Conference on Status, Opportunities and Challenges in Life Sciences, Radhabai Kale Mahila Mahavidyala, Ahmednagar, MS, September17- 19, 2013.
- 17. J.N.Nehul, "Effect of Various Culture Media on Growth and Chlorophyll Pigments in a CyanobacteriumOscillatoriaobscura." National Seminar on Global Warming and its Effect on Biodiversity, NACS, College, Shevgaon, Dist-Ahmednagar, MS, 27-28december, 2013.
- 18. J.N.Nehul, "Studies on Growth and production of Carotenoides in a Cyanobacterium *Anabaena oryzae*." National Seminar on Advances in Plant Sciences For Sustainable Rural Development, C.T. Bora College, dist-Pune, September 23&24,2014.
- 19...J.N.Nehul, Studiesonantifungalactivity of acyanobacterium *Westiellopsisprolifica* janet. "National conference on Interedisciplinary Approaches in Chemical Sciences, RKMM, Ahmednagar 19&220, december, 2014.
- 20. J.N.Nehul "Growth and production of carotenoids in a Anabaena oryzae in different nutrient media" National Conference on Biodiversity And Environment, ASC College ,Sonai, Tal- Newasa, Dist-Ahmedndgar, 22-23 January, 2016.
- 21. J.N.Nehul, "Studies on Growth and Production of Carotenoids in *Anabaena variabilis* in Different Nutrient Media.." National Seminar on Advances in Life Sciences for Human Welfare, Rafique Zakaria College, Aurangabadr, MS, 18 February, 2017.
- 22. J.N.Nehul, "Marginalised Literature.." National Seminar on Marginalised Literature, Dadapatil Rajale College, Adinathnagar, Tal- Pathardi, Dist-Ahmednagar, MS, 27-28 Januauary, 2017.
- 23. J.N.Nehul, "Antifungal Activity of a Cyanobacterium *Westiellopsis prolifica* janet.." National conference on Industry, Academia and Environmental Challenger (NCIAEC), RKMM, Ahmednagar 22-23, december, 2017.
- 24. J.N.Nehul, "Estimation of Growth and Carotenoids in *Microcoleus* Species.." National Seminar on Recent Advances in Natural Sciences and Social Sciences, Dept. of Botany, BAMU, Aurangabad, 24-25 December 2017.
- 25. J.N.Nehul, ," Studies on growth and estimation of carotenodes in a cyanobacterium Camptylonema species". National Seminar Bhagwan Mahavidyalaya, Ashti (BAMU sponsored)1 st February 2020

Papers Presented in State Level symposia, Conferences, Seminars, etc.

- 1.J.N. Nehul and T.D. Nikam,2010 "Nostacales from ShriVridheshwar Region of Pathardi Tehsil" State level seminar on Biodiversity of Ahmednagar, District, New Arts, Com and Science College, Shevgaon,Dist-Ahmednagar,MS, Jan 12, 2010.
- 2. J.N.Nehul and T.D.Nikam, 2010 "Biotechnological Applications of cyanobacteria." State level conference on Advances in Life Sciences, Shri Anand College of Science, Pathardi, Dist-Ahmednagar, MS, Feb 12-12, 2010.
- 3. J.N.Nehul and T.D.Nikam, 2010 "Effect of nitrates, phosphates, sulphates and urea on growth and biomass production in *Scytonemamirabile*." State Level Conference on Current Status of Plant Sciences, Radhabai Kale Mahila Mahavidyala, Ahmednagar, MS, March 19-20, 2010.
- 4. J.N.Nehul and T.D.Nikam, 2010 "Cyanobacterial diversity of ShriHarihareshwar region of Pathardi tehsil." State Level Seminar on Biodiversity Aspects in Plant Sciences, New Arts, Com. and Science College Shevgaon, Dist-Ahmednagar, MS, December 3-4, 2010.
- 5. J.N.Nehul 2012 "Agricultural Tourism-Scope and Opportunities in Pathardi Tehsil." State Level Seminar on Agricultural Tourism, Dadapatil Rajale Arts and Science College ,Adinathnagar,Tal-Pathardi,Dist-Ahmednagar,MS,Feb 13-14, 2012.
- 6.J. N. Nehul 2015 "Influence of Various Culture Media on Growth and Chlorophyll Pigments in a Cyanobacterium Westiella species." State Level Conference on Recent Advances in Plant Sciences, Jjamata College of Arts and Science Bhende, Dist-Ahmednagar, MS, Jan 16-17, 2015.
- 7.J.N. Nehul, 2016 "Effect of different nutrient media on growth and production of carotenoidesin Aulosira species." State level conference on Opportunities, Challenges and Prospect in Life Sciences, Shri Anand College, Pathardi, 2-3 February 2016.
- 8. J.N.Nehul 2018 "Studies on Effect of Various Culture media on growth and Carbohydrates Content of Westiellopsis prolifica Janet". State Level Conference on Biodiversity of Maharashtra, ASC, College, Sonai25-26 February 2018.
- 9. J.N.Nehul 2018 "Estimation of Growth and Carbohydrates Content in a Cyanobacterium *Anabaena circinalis*". State Level Conference on Emerging Trends in Biodiversity Conservation, K.J. Somayya College, Kopargaon. 7-8 January 2019.
- 10.J.N. Nehul,2019" State level Seminar Shri Dyaneshwar Mahavidyalaya, Newasa(BOD, SPPU sponsored) 1-2 February 2019

Curricular, Co-curricular and extra-curricular activities carried out:

(A) College Work

- 1. Organized one-day district level seminar on Botany Sponsored by SPPU, Pune for college teachers on 18th January 2011.
- 2. Organized expert lecture series for six times in the College from 1998-99 to 2004-05.
- 3. Worked as an NSS Programme Officer during 2003-2006.
- 4. Worked as Coordinator for State Level Memorial lecture series in College from 18 th to 22 nd August 2010.
- 5. Worked as a Coordinator of Samarth Bharat Abhiyan in 2005 and 2006.
- 6. Organized Two-Day State level Conference on Recent Trends in Life Science sponsored by SPPU, Pune on 18th January 2015.
- 7. Worked in various College committees like UGC proposals, NAAC, Time Table, Botanical garden, RUSA, Waste disposal, Library Advisory Committee, etc,

(B) Resource Person/University Committee Work (LIC) / Expert

- 1. Delivered a Lecture on Nitrogen Metabolism in Shri Dnyaneshwar College, Newasa.(Ahmednagar) on 12/12/2009
- 2. Delivered a Lecture on Ascent of Sap in Shri Anand College of Science, Pathardi.(Ahmednagar) on 20/02/2010
- 3. Delivered a Lecture on Group Discussion in Shri Anand College of Science, Pathardi.(Ahmednagar) on 05/03/2010.
- 4. Lecture on Presentation Skills in Abasaheb Kakde College, Bodhegaon.(Ahmednagar) on 15-10-2010.
- 5. Lecture on Presentation Skill Development in Abasaheb Kakde College, Bodhegaon.(Ahmednagar) on 21-12-2011.
- 6. Worked as a committee member of LIC, SPPU, Pune for renewal of M.Sc. Organic Chemistry in Maharaja Jivajirao Shinde Mahavidyalaya, Shrigonda on 25-08-2010.
- 7. Delivered lecture on Social Service in NSS camp of Abasaheb Kakade College Bodhegaon, at. Ladjalgaon, Tal- Shevgaon, Dist-Ahmednagar Date- 13/12/2012.

- 8. Delivered a lecture on Aquatic Ecosystem at Jayakwadi dam under Student Welfare Board for the students of Abasaheb Kakade College, Bodhegaon on 11-01-2013.
- 9. Worked as a Resource Person and delivered Lecture on Mendelism in Science Teachers Training Programme at Shri Vridheswar Higschool, Tisgaon(Ahmednagar) on 16/01/2013.
- 10. Worked as an expert for interviews of Research project fellow of Botany at Arts, Commerce and Science College, Sonai on 23/04/2013.
- 11. Lecture delivered on Science and Life in special winter camp of Abasaheb Kakade College, Bodhegaon at Antarvali khurd on 15/12/2013.
- 12. Delivered a lecture on Scienec and Technology under student Welfare Board In PMT's Arts, Commerce and Science College, Shevgaon on 18/12/2013.
- 13. Worked as an Expert for Interviews of selection of Assistant professor of Botany in Dadapatil Rajale College, Adianathnagar on 30/08/2014.
- 14. Worked on the Panel of Experts for Interviews of selection of Assistant professor of Science Faculty subjects in Dadapatil Rajale College, Adianathnagar on 02/07/2015.
- 15. Worked on the Panel of Experts for Interviews of selection of Assistant professor of Science Faculty subjects in Dadapatil Rajale College, Adianathnagar on 28/07/2017.
- 16. Lecture delivered on Fruits and Vegetables Production Technology in Shri Dnaneshwar Mahavidyalaya, Newasa(Ahmednagar on 28/09/ 2017.
- 17. Lecture delivered on Plant Biotechnology in Jamkhed Mahavidyalaya, Jamkhed (Ahmednagar) 17 /01/ 2018.
- 18. Delivered a lecture on Environmental Awareness under Nehru Yuva Kendra in PMT's Arts, commerce and Science College, Shevgaon on 18/01/2018.
- 19. Worked as a Resource person in National level Conference organised by Dr. Rafiq Zakaria College for Women, Aurangabad and delivered a Lecture on Antimicrobial Activity of Cyanobacteria on 20 January 2019.
- 20. Worked as a Resource person in State level Conference organised by Dyaneshwar Mahavidyalaya, Newasa(Ahmednagar) and delivered a Lecture on Biotechnological Applications of Cyanobacteria on 2 February 2019.
- 21. Worked on LIC appointed by SPPU, Pune for Laboratory Inspection Committee at Abasheb kakade College, bodhegaon on 19/02/2018.

- 22. Worked as a member of Academic Audit Committee appointed by BAMU, Aurangabad for Academic Audit of Shri Shivaji College, Paranda, Dist-Usmanabad on 14/03/2019.
- 23. Worked as a member of Academic Audit Committee appointed by BAMU, Aurangabad for Academic Audit of Arts and Commerce College, Garkheda, Aurangabad on 16/03/2019.
- 25. Worked as a Resource person and delivered a lecture on Discipline in Abasaheb kakade College, Bodhegaon Under Youth Education, SPPU, pune on 09/01/2020.
- 26. Delivered a lecture on Water Literacy in NSS Special Winter Camp organized by PMT's Arts, Commerce and Science College, Shevgaon at Samangaon on 19/01/2020.
- 27. Worked as a member of LIC appointed by SPPU, Pune for continuation of Research Centre of Botany in Arts, Commerce and Science College, Sonai, Ahmednagar on 03/03/2021.
- 28. Worked as a member of LIC appointed by SPPU, Pune for Permission of Microbiology Subject in Abasaheb Kakade College of Science, Bodhegaon, Ahmednagar on 28/03/2021.
- 29. Worked as a member of LIC appointed by SPPU, Pune for Laboratory Inspection at Chandrabhama College of Science, Karjat, Ahmednagar on 19/06/2021.

(C) Participation in University/College Work/Examination Work-

- 1. Worked as member of LIC committee in different Colleges.
- 2. Worked as Senior Supervisor at University Examinations in various Colleges.
- 3. Worked as Question Paper Setter at University Examinations for S.Y. and T.Y.B.Sc..
- 4. Worked as College Information Officer from 2012-13 to till date.
- 5. Worked as College Examination Officer (CEO) from 2012-13 to 2016-17
- 6. Worked as district Coordinator for practical exam. in Botany at SYBSc October2013.
- 7. Worked as district Coordinator for practical exam. in Botany at SYBSc March 2014.
- 8. Worked as district Coordinator for practical exam. in Botany at SYBSc March 2015.
- 9. Worked as district Coordinator for practical exam. in Botany at SYBSc October 2015.

- 10 Worked as Practical Examiner at S.Y.B.Sc. and T.Y.B.Sc.Botany various examinations March/ April.
- 11. Worked as paper setter and Moderator for T.Y.B.Sc. Botany from 2015-16 to 2020-21.

(D) Participation in Syllabus Workshops, Conferences, Seminars, Courses, etc.

- 1.Participated in workshop on "Discssion and framing of F.Y.B.Sc. Botany syllabus" at R.B.N.B. College, Shrirampur on 13th February 2002.
- 2. Participated in Orientation workshop on "Discssion and framing of S.Y.B.Sc. Botany syllabus" at A.S.C. College, Rahuri on 23rd December 2002.
- Participated in workshop on "Revision of S.Y.B.Sc. Botany syllabus" at P.V.P.
 College, Pravaranagar on 25th February 2003.
- Participated in state level conference on "Biotechnology, Biodiversity and Ennironmental Aspects" at P.V.P. College, Pravaranagar on 26 th February 2003.
- 5. Participated in one day seminar on, "Biosoftwares of Micribial Biodiversity" at Radhabai Kale MahilaMahavudyalaya, Ahmednagar on 7 th January, 2008.
- 6. Participated in Two day State Level seminar on "Soil and Forest Conservation" at Arts, Commerce and Science College, Sonai on 19 th and 20 th September 2008.
- 7. Participated in district Level Workshop on "Discussions on S.Y.B.Sc Botany Practicals at Ahmednagar College Ahmednagar On 8th Jan 2010
- 8. Participated in one day State Level seminar on "Biodiversity of Ahmednagar District" at New Arts, Commerce and Science College, Shevgaon on 12 th January 2010.
- Participated in National Seminar organized by Scientific and Technical Terminology
 Commission, HRD Ministry, New Delhi on 21 st and 22 nd October 2010 at MGM Institute, Aurangabad.
- 10. Participated in National Seminar organized by Scientific and Technical Terminology Commission, HRD Ministry, New Dehli on 29 th and 30thjune 2012 at Arts, Commerce and Science College, Shriwardhan, Dist-Raigad.
- 11. Participation in Workshop for College examination officer at Arts, Commece and

- Science College, Rahuri on 22/10/2012.
- 12. Participated in Orientation workshop on "Discssion and framing of F.Y.B.Sc. Botany syllabus" at RKMM College, Ahmednagaron28th February 2013.
- 13. Participated in National Seminar organized by Scientific and Technical Terminology Commission, HRD Ministry, New Delhi on 23rd and 24th August, 2013 at New Arts, Commerce and Science College, Shevgaon, Dist-Ahmednagar, MS.
- 14. Participated in University of Pune sponsored one day workshop on "Framing of S.Y.B.Sc. Botany syllabus" organized byNACSCCollege, Parner Dist-Ahmednagar on 20th December 2013.
- 15. Participated in workshop on "DiscssiononT.Y.B.Sc. Botany syllabus" at Jijamata College of Arts and Scienc Bhende, Dist-Ahmednagar, MS, Dec. 27, 2014.
- 16. Participated in One day workshop on "Restructuring T..Y.B.Sc. Botany syllabus" at RKMM College, Ahmednagar on 28th Jan ,2015.
- 17. Participated in National Seminar organized by Scientific and Technical Terminology Commission, HRD Ministry, New Dehli on 9 th and 10thSeptember 2015 at Vidya Pratisthan Arts, Commerce and Science College, Baramati, Dist-Pune.
- 18. Participated in Online International Conference on "Biodiversity Conservation and Tourism". Organised by Shri. S. H. Kelkar College of Arts, Commerce and Science, Devgad, Dist. Sindhudurg, Maharashtra on 17th May, 2020
- 19. Participated in One day workshop on "Restructuring S..Y.B.Sc. Botany syllabus" at NACS College, Parner on8th August ,2020.
- 20. Participated in the International Virtual Seminar held on the topic "Environmental Protection and Life Management in Present Scenario" organised by GOVT. P. G. COLLEGE, BINA (M.P.) INDIA on 16/08/2020.
- 21. Participated in "Two Days National Workshop on Ecological Footprints" organised by Department of Geography, Botany and Environmental Studies of Arts, Commerce and Science College Onde, Tal-Vikramgad Dist.- Palghar (MS) 401605 & Department of P.G. Studies in Geography, Dr. B.R. Ambedkar Government College, Sri Ganganagar, Rajasthan dated on 19th & 20th August 2020.

- 22. Participated in International Faculty Development programme on AI Based Proctoring in Next Generation Education, organised by IQAC and School of Computational Science, Chennai on 23 rd May 2020.
- 23. Participated in International Symposium on Recent Trends in Chemical Sciences, organised by Dada Patil Mahavidyalaya, Karjat, Dist-Ahmednagar (MS) on 12th August 2021.
- 24. participated in the One Day International e-Conferenc e on "Importance of Foreign Language In Science and Technology" organized by Department of Mathematics along with IQAC, Dada Patil Mahavidyalaya, Karjat and Department of Mathematics, Jamkhed Mahavidyalaya, Jamkhed on 09/10/2021.

(E) Subjects Taught at UG Level

1. Plant Physiology 2. Plant Biotechnology 3. Genetics 4. Tissue Culture.5. Ethnobotany 6. Plant Resources Management 7. Plant Ecology 8. Environmental Awareness 9. Applied Botany 10. Horticulture.11. Industrial Botany.12. Plant Diversity. 13. Pharmacognosy. 14. Algae, Fungi and Bryophytes. 15. Plant Morphology and Anatomy. 16. Cell Biology. 17. Environmental Studies.18. Computational Botany. 19. Cell Biology. 20. Molecular Biology.

Dr. J.N.Nehul