PROFORMA FOR THE ANNUAL REPORT
(1-04-2025 to 31-03-2026)

UNIVERSITY SCHOOL OF STUDIES/CENTERS

PART A: SCHOOL INFORMATION

1. Details of the Academic Programme(s) offered by the School:

S. No.	Name of the Programme	Duration	Sanctioned Intake	Total Strength (Year wise)	Governing Bodies
1	B.Sc./M.Sc. dual degree in Physics	4 + 1 year	73 + 2 Def = 75	21	
2	B.Sc./M.Sc. dual degree in Chemistry	4 + 1 year	73 + 2 Def = 75	19	
3	B.Sc./M.Sc. dual degree in Mathematics	4 + 1 year	74 + 2 Def = 76	21	
4	Ph.D. in Physics			17	
5	Ph.D. in Chemistry			41	
6	Ph.D. in Mathematics			20	

2. New programme(s) commenced during Academic Session 2025-2026: None

S. No.	Name of the Programme	Duration	Sanctioned Intake	Total Strength (Year wise)	Governing bodies

3. Details about new facilities in the School/Centre: None

S. No.	Facility	Details of the Facility (not more than 50 words)

4. Seminars/ Workshops/ Conference/ Symposium etc. organized by the School/Centre

S.No.	Title of the Event/ Activity	Date/ Duration	No. of Participants	Details of the Event (not more than 50 words)
	Invited talk organized by USBAS	20.01.2026	About 20	Invited talk organized by USBAS Speaker - Prof. M. A. Shah (FRSC, FAPS), Dean, Alumni & International Affairs & Former Head, PG Department of Physics, NIT, Srinagar, J&K, India on the topic "***Nano Science: A Precursor for Modern Technologies***"

16/10/2026

5. Extra or co-curricularactivities like festivals/annual meets etc. organized by the School/Centre:

S. No.	Name of Event	Date & Duration	Details of the Events (not more than 50 words)
	National Science Day	28.02 2026	In year 2026 the official theme for National Science Day 2026 "Women in Science: Catalysing Viksit Bharat" announced by the Department of Science and Technology. Our School USBAS celebrated this day and aliened the programme with the above given theme. USBAS had two invited talk by chief guest of the programme Prof. Avinash C. Sharma, Director, IUAC and Guest of honour Shri Surender S. Ghonkrokta, Retd. IAS and 20 scientific posters participated by different USS students and faculty members to show case their scientific research. This year USBT also join USBAS to celebrate National Science Day-2026.
	Community Outreach Initiatives		USBAS Under Graduate Students (B.Sc./ M.Sc. (Dual Degree) programme) actively participated in various NSS initiatives including the Plantation Drive, Cleanliness Drive, world Prosthodontist Day Walkathon, and My Bharat Budget Quiz. Through these activities, students promoted environmental awareness, cleanliness, health, and responsible citizenship. Together, they reflected the true spirit of NSS, GGSIPU| USBAS NSS Cell.

6. Any MOU (Academic/ R&D) signed by the School/Centre:None

S. No.	Date of MOU	Details of MOU like collaborating institute etc.(not more than 50 words)

7. Details of any official journal/ Magazine etc. published:None

S. No.	Name of Journal	Name of Editorial Team	Dates of Initiation	ISSN No.

PART B: FACULTY INFORMATION

8. Publications by the faculty members: (Please follow APA format)

a) Articles published in journals

Prof. Rashmi Bhardwaj

1. Xue, X., Bhardwaj, R., Khalaf, O. I., Sangwan, V., & Sharma, S. (2026). Fractal memory and deep learning: A new paradigm for stock market prediction. *Egyptian Informatics Journal, 33*, 100916.
2. Inderjeet, & Bhardwaj, R. (2026). A new variant of Simpson's method with accelerated sixth order of convergence. *Palestine Journal of Mathematics, 15*(1), 120–128.
3. Sangwan, V., Bhardwaj, R., Soto-Bubert, A., & Acevedo, R. (2026). Ensemble machine learning models for ternary electrolyte viscosity prediction. *Chemical Thermodynamics and Thermal Analysis, 21*, 100278.
4. Sangwan, V., Bhardwaj, R., Soto-Bubert, A., & Acevedo, R. (2026). Boosting approach to brine viscosity estimation: Binary system development. *Chemical Thermodynamics and Thermal Analysis, 21*, 100273.
5. Soto-Bubert, A., Bhardwaj, R., & Acevedo, R. (2025). Viscosity model of KCl–NaCl–H_2O and $CaCl_2$–NaCl–H_2O brines, in the temperature range from 273.15 to 333.15 K. *Chemical Thermodynamics and Thermal Analysis, 21*, 100253.
6. Sangwan, V., Bhardwaj, R., Alfaro, M., Soto-Bubert, A., & Acevedo, R. (2025). Non-linear AI based viscosity prediction for binary brine data. *Chemical Thermodynamics and Thermal Analysis, 20*, 100231.
7. Inderjeet, & Bhardwaj, R. (2025). An improved class of Newton Raphson method for the numerical simulation of nonlinear equations. *Palestine Journal of Mathematics, 14*(4), 104–108.
8. Inderjeet, & Bhardwaj, R. (2025). A new variant of secant technique for simulation of nonlinear equations. *Journal of Interdisciplinary Mathematics, 28*(8), 2867–2876.
9. Bangia, A., & Bhardwaj, R. (2025). Fractional ordered epidemiology model simulation for pathogenesis of the pandemic. *Franklin Open, 12*, 100320.
10. Inderjeet, & Bhardwaj, R. (2025). Numerical simulation of nonlinear equation by converting quadrature rule to iterative technique. *Journal of Interdisciplinary Mathematics, 28*(5), 1837–1845.
11. Inderjeet, & Bhardwaj, R. (2025). An integrated approach of the numerical simulation of nonlinear equations by modified bisection and regula falsi method. *Journal of Interdisciplinary Mathematics, 28*(4), 1553–1571.
12. Inderjeet, & Bhardwaj, R. (2025). Numerical simulation of nonlinear equations by modified secant method. *IAPQR Transactions, 49*(1), 100–117.

Prof. Shruti Aggarwal

1. Abhishek Tiwari, Gopal N. Tiwari, Sourabh Anand, Shruti Aggarwal (2025) Modelling of a Hybrid Concentrated Solar Photovoltaic Thermal – Thermoelectric Generator Collector with Vapour Absorption Refrigeration System at different Constant Collection Temperatures. *Environmental Progress & Sustainable Energy, e70144*, 1-24, https://doi.org/10.1002/ep.70144
2. Abhishek Tiwari, Shruti Aggarwal, Comparative analysis of artificial neural network-based predictive models for hybrid compound parabolic concentrator - Photovoltaic thermal—Thermoelectric generator collector across multiple performance metrics. *Environmental Progress and Sustainable Energy, e70199*,1-18, https://doi.org/10.1002/ep.70199
3. Yugam Bharti, Shruti Aggarwal, Vikas Malik (2025), Effect of nanowire curviness on the resistance of nanowire-based networks:A computational study, International Journal of Materials Research, 116 (5), 433-441, https://doi.org/10.1515/igmr-2024-0013

Prof. Vaishali Singh

(Singh et al., 2026; Singh, Mohapatra, et al., 2025; Singh, Vats, et al., 2025; Vats et al., 2025)

1. Singh, A., Mohapatra, S., Tomar, M., Chowdhuri, A., & Singh, V. (2025). Low temperature NO2 gas sensing achieved by mesoporous SnO2. *Journal of Alloys and Compounds*, *1013*(2). https://doi.org/10.1016/j.jallcom.2025.178592
2. Singh, A., Vats, M., Mohapatra, S., & Singh, V. (2025). Facile synthesis of mesoporous tin oxide particles: effect of synthetic routes. *Journal of Materials Science*, (0123456789). https://doi.org/10.1007/s10853-025-10884-9
3. Singh, A., Vats, M., Mohapatra, S., Tomar, M., Chowdhuri, A., & Singh, V. (2026). High-performance low temperature indium doped mesoporous tin oxide based NO2 sensor. *Journal of Alloys and Compounds*, *1073*. https://doi.org/10.1016/j.jallcom.2026.189056
4. Vats, M., Singh, A., Kotnala, R. K., Shah, J., & Singh, V. (2025). Eco-friendly urea-assisted m-SnO2-based hydroelectric cell for green energy production. *New Journal of Chemistry*, *49*(10), 4072–4084. https://doi.org/10.1039/d4nj04280h

Prof.Gulshan Kumar

1. Kumar, R., Park, K., **Kumar, G.**, & Seo, J. (2026). Current trends in biodegradable plastics for barrier, active, and intelligent packaging: A review**. Polymer Bulletin**, **Springer** 83. **I.F. 4.2**
2. Kumar, K., Tyagi, U., Sirohi, S., Maity, S., Singh, S., Roy, D., & **Kumar, G**. (2026). Multi-stage thermal degradation of food waste-derived carbonized biomass: Advanced kinetic and mechanistic insights. **Journal of the Indian Chemical Society**, **Elsevier** 103, Article 102561. **I.F. 3.4**
3. Dahiya, J., Narula, A., & **Kumar, G**. (2025). Triazoles in the carbohydrate world: Unlocking multifunctional glycohybrids. **Chemistry and Materials,** 4(3), 79-98. **I.F. N/A**
4. Dahiya, J., Narula, A., & **Kumar, G**. (2025). Unveiling the role of silica sulfuric acid and cellulose sulfuric acid in organic synthesis: A comprehensive review. **Discover Chemistry**, **Springer** 2. **I.F. N/A**
5. Maity, S., Tyagi, U., Kumar, R., Kumar, K., **Kumar, G**., & Sirohi, S. (2025). Fabrication of natural polymer-based films for food preservation and packaging application: Characteristic assessment of ultra-low graphene content**. Polymer Bulletin**, **Springer** 82(9). **I.F. 4.2**

Prof.S.Neeleshwar

1. Anjali Saini, Mohindar S. Seehra, Mukesh K. Bairwa, Gowrishankar Ramadurai, Subhash Thota, Harshita Singh, Arpita D. Singha, Chandra S. Gantepogu, and **Neeleshwar Sonnathi**. "Strain-stabilized surface defects produce room temperature ferromagnetism in Mn_4Si_7 nanostructures." *Nanotechnology* 37, no. 6 (2026): 065701
2. Panwar, A., Malik, V., Mahanti, S. D., **Sonnathi, N.**, & Bagga, A. (2025). High-temperature effects on oscillatory conductivity in disordered quantum dot arrays: Role of Coulomb interactions and localization length. Journal of Applied Physics, 137(11).
3. Bairwa, M. K., Saini A., Gowrishankar R., & **Sonnathi, N.** (2025). Engineering SnSe Nanoparticles via High-Energy Ball Milling and Melting: A Comparative Study on Phase and Structural Properties. Phys. Status Solidi A 2400550.

Prof.Yogesh Kumar Tyagi

1. Nidhi Yadav, Ram Singh and Yogesh K. Tyagi. Progress in Synthesis and Therapeutic Applications of Mefloquine: A Review, Current Topics in Medicinal Chemistry, 1-18, 2025. DOI: *10.2174/0115680266389780250828104 63.*
2. Vaishali Prashar, Rajinder K. Gupta, Yogesh Kumar Tyagi. A Review of Natural Gums and Mucilage Based Hydrogels for Food, Agriculture, Biomedical And Cosmetics: A Review". The Chemical Record, 2026; 26:e202500238 1 of 38. https://doi.org/10.1002/tcr.202500238

Prof.Leena Khanna

1. Asmita Singh, Mansi, Pankaj Khanna, Deepshikha Gupta, Sandeep Kumar Singh and **Leena Khanna***. Morpholino Pyrimidine/Pyrimidino-Oxazines: An Integrated Study as DGAT1 Inhibitors Through QSAR, Molecular Docking, ADMET, and Computational Simulation. *ChemistrySelect*, **2025**, 10(4), e02210. DOI: 10.1002/slct.202502210
2. Charu Bhutani, Mansi, Pankaj Khanna, Asmita Singh, Sangeeta Talwar and **Leena Khanna***. In Silico Screening of Flavonoids from Cycas as Potential Aromatase Inhibitors for Breast Cancer Therapy and Estimation of Total Flavonoid Content and LC–MS Analysis of Cycas revoluta Extract. *Chem. Biodiversity*, **2025**, 22(12), e01571. DOI: 10.1002/cbdv.202501571
3. Deepanshi Vijh, Aryaman Singh, Mansi, **Leena Khanna** and Promila Gupta. Network pharmacology and molecular docking-based insights into the anti-melanoma potential of dalbergin. *In Silico Pharmacol.* **2026**, 14, 93. DOI: 10.1007/s40203-026-00604-9
4. Himani, Asmita Singh, Pankaj Khanna, Sandeep Kumar Singh and **Leena Khanna***. Biological Applications and Synthesis of 1,2,3-triazole Linked Six Membered Fused N-heterocycles. *Chem. Biodiversity*, **2026**, 23(4), e03719. DOI: 10.1002/cbdv.202503719
5. Pankaj Khanna, Kavita Mittal, Charu Bhutani, Asmita Singh, Sangeeta Talwar and **Leena Khanna***. A Recent Review on Aqua Mediated Synthesis of DHPMs via the Biginelli Reaction. *Curr. Org. Chem.*, **2026**, 30(7), 483–494. DOI: 10.2174/0113852728403897250831200808

PROF. SHIPRA MITAL GUPTA

1. Pandey, S., *** Gupta**, S. M., Sharma, S.K. (2025) "Detection of Manganese (II) by PVP-AgNPs for water monitoring" *Environmental Monitoring and Assessment* 197:1238. ISSN: 1573-2959, https://doi.org/10.1007/s10661-025-14716-w

a) Full papers published in the Conference Proceedings

Prof Rashmi Bhardwaj

1. Inderjeet, & Bhardwaj, R. (2026). A variant of Simpson's technique for accelerated third order of convergence. In *2025 IEEE International Conference on Recent Smart Technologies in Engineering for Sustainable Development (DELCON)* (pp. 1–4). IEEE.
2. Sharma, S., & Bhardwaj, R. (2026). Quantum enhanced sensors and measurement technologies: A new paradigm for precision and sensitivity. In *2025 IEEE International Conference on Recent Smart Technologies in Engineering for Sustainable Development (DELCON)* (pp. 1–7). IEEE.
3. Sangwan, V., & Bhardwaj, R. (2025). Regional analysis of influential meteorological factors in daily precipitation forecasting using machine learning. In *2025 10th International Conference on Signal Processing and Communication (ICSC)* (pp. 562–567). IEEE.

b) <u>Book</u>

Nil

c) Chapters in a book

Prof. Rashmi Bhardwaj

1. Inderjeet, & Bhardwaj, R. (2025). Numerical simulation of parabolic partial differential equation. In S. Bhattacharyya & H. S. Mahato (Eds.), *Modeling, analysis and simulations of multiscale transport phenomena (ICMASMTP 2022)* (pp. 149–162). Springer Proceedings in Mathematics & Statistics. Springer Nature Singapore. ISBN 978-981-96-3098-1

Prof Gulshan Kumar

1. Maity, S., Tyagi, U., Kumar, K., & **Kumar, G.** (2026). Environmental life cycle analysis of renewable energy. In Smart energy technologies towards a sustainable future (pp. 168-193). CRC Press.

d) Any other Publications

Prof.Rashmi Bhardwaj

1. Pareek, R., & Bhardwaj, R. (2025). Artificial intelligence recap and retrospection (RR). *Revista INGLOMAYOR, 25*. INGLOMAYOR.
2. Pareek, R., & Bhardwaj, R. (2025). Customer service: Regularity and responsibility (CSRR). *Revista INGLOMAYOR, 25*. INGLOMAYOR.
3. Pareek, R., & Bhardwaj, R. (2025). Data analytics. *Revista INGLOMAYOR, 25*. INGLOMAYOR.
4. Pareek, R., & Bhardwaj, R. (2025). AI based order management system: Rehash and recap (RR). *Revista INGLOMAYOR, 25*. INGLOMAYOR.
5. Pareek, R., & Bhardwaj, R. (2025). Program management & portfolio management. *Revista INGLOMAYOR, 25*. INGLOMAYOR.

PROF. SHIPRA MITAL GUPTA

Patent Application No. 202511084932 dated 8/9/25 "Nitrogen and Sulfur-Doped Carbon Quantum Dots for Detection of Silver (I) Ions", Inventors: Shipra Mital Gupta, Surendra Kumar Sharma, Shailja Pandey, Applicant: Guru Gobind Singh Indraprastha University

<u>Papers in Conference:</u>

PROF. SHIPRA MITAL GUPTA

1. "Silver Nanoparticles based Colorimetric Sensor for Detection of Heavy Metal Ions in Water" at International Conference on Climate Change and Social Justice: Challenges and Solutions of Environmental Justice (ICCSJ-2026), MMH College Ghaziabad INDIA on Feb 27-28, 2026.
2. "Colorimetric Detection of Manganese (II) Ions Using Polyvinyl Pyrrolidone-Functionalized Silver Nanoparticles in water" at International Conference BioFrontiers 2026 – Trends, Technology & Translational Research, UPL University of Sustainable Technology, Gujarat INDIA on March 6-7, 2026.
3. "Effect of CNT concentration on SDBS stabilized CNT/water nanofluid" at International Conference BioFrontiers 2026 – Trends, Technology & Translational Research, UPL University of Sustainable Technology, Gujarat INDIA on March 6-7, 2026.
4. "Development of PVP-AgNPs/OPD-based detection system for Hg^{2+} in water" at International Conference on CBRNE Related Threat to National Security an Safety- Antiterrorism Measures for Safe Environment (ICCTNSS-2026), Delhi University, Delhi INDIA on March 12-13, 2026.
5. "Comparison of CNT/water nanofluid prepared using SDBS and Triton X-100" at International Conference on CBRNE Related Threat to National Security and Safety- Antiterrorism Measures for Safe Environment (ICCTNSS-2026), Delhi University, Delhi INDIA on March 12-13, 2026.

Prof.Ram Shankar Gupta

1.S Rani, RS Gupta, YJ Suh (2026). Yamabe and Ricchi Solitons on Vaidya spacetime. International Journal of Geometric Methods in Modern Physics 23 (08), 2550218 Journal. 10.1142/S0219887825502184. ImpactFactor 2.5

***2**. G Goel, RS Gupta (2026). Weingarten osculating surfaces of non-null curves in minkowski 3-space. Honam Mathematical Journal 48 (2), 369-388. 10.5831/HMJ.2026.48.2.369. Impact Factor 0.3*

Prof. Satyabrata Mohapatra

1. Singh, A., Vats, M., Mohapatra, S., Tomar, M., Chowdhuri, A., & Singh, V. (2026). High performance low temperature indium doped mesoporous tin oxide based NO_2 sensor. *Journal of Alloys and Compounds*, *1073*, 189056.
2. Choudhary, S., & Mohapatra, S. (2025). Enhanced photodegradation of pollutants by Er doped ZnO nanorods fabricated using thermal decomposition. *Next Materials*, *8*, 100744.
3. Guimaraes, M. H. D., Badilescu, S., Mohapatra, S., & Franzese, G. (2025). Editorial: Emerging leaders in nanotechnology. *Frontiers in Nanotechnology*, *7*, Article 1637617.
4. Singh, A., Mohapatra, S., Tomar, M., Chowdhuri, A., & Singh, V. (2025). Low temperature NO_2 gas sensing achieved by mesoporous SnO_2. *Journal of Alloys and Compounds*, *1013*, 178592.
5. Singh, A., Vats, M., Mohapatra, S., & Singh, V. (2025). Facile synthesis of mesoporous tin oxide particles: effect of synthetic routes. *Journal of Materials Science*, *60*(14), 7273–7288.

Dr.Arif Ali Khan

1.Gourav Arora, Priya and *Arif Ali Khan:* Selective cyclisation of 2-(2-Hydroxy-phenyl)-2,3-dihydro-1H-quinazolin-4 one with formaldehyde and isolation of two isomeric oxazines, *Oriental J. Chemistry*, 42(2), 412-422 (2026).

9. Seminars/ Workshops/ Conference/ Symposium etc. participated by the Faculty:

S. No.	Name of faculty	Date &Duration	Details of Event (not more than 50 words)	Role of faculty (Chairperson/Invited Speakers/oral/Poster)
1	Prof. Rashmi Bhardwaj	08.04.2025 (1 day)	Seminar "Implosion 25", Ramlal Anand College, University of Delhi. Technical lecture on "Nonlinear Pathways for Industry".	Invited Speaker
2	Prof. Rashmi Bhardwaj	03.05.2025 (1 day)	National Seminar, Chitkara University, Himachal Pradesh, sponsored by Raja Rammohun Roy Library Foundation (Ministry of Culture, GoI). Talk on "The Future of Libraries in the Era of Artificial Intelligence".	Resource Person
3	Prof. Rashmi Bhardwaj	22–24.05.2025 (3 days)	International Conference on Role of Climate Change in Water Resources Management for a Sustainable Future, Tashkent State Transport University, Uzbekistan, with Istanbul Aydın University, Turkey. Six papers presented with Ph.D. scholars (V. Sangwan, K. Chaudhary, D. Kansal, S. Sharma, E. Yadav, I. Yadav).	Oral presentations (co-author)
4	Prof. Rashmi Bhardwaj	27–28.06.2025 (2 days)	National Workshop on Mathematical Modelling and AI Techniques in Infectious Disease Dynamics, SASTRA Deemed University, Thanjavur. Talk on "Nonlinear Pathways of Covid-19".	Resource Person
5	Prof. Rashmi Bhardwaj	28–30.06.2025 (talk 29.06.2025)	International Conference on Mathematical Analysis & its Applications (ICMAA-HM-2025), Karnatak University, Dharwad, with PIMSCI. Talk on "Fractal Neuronal Wavelet Hybridized Modelling of Covid-19".	Resource Person / Invited Speaker
6	Prof. Rashmi Bhardwaj	29.06–01.07.2025 (talk 30.06.2025)	World Conference on Statistical Inference (WCSI 2025), Department of Statistics, Bharathiar University, Coimbatore (hybrid). Talk on "Real Life Challenges through Nonlinear Complexities".	Resource Person / Invited Speaker

S. No.	Name of faculty	Date &Duration	Details of Event (not more than 50 words)	Role of faculty (Chairperson/Invited Speakers/oral/Poster)
7	Prof. Rashmi Bhardwaj	28–30.08.2025 (3 days)	4th International Conference on Applied Mathematics in Science and Engineering (AMSE-2025), ITER, Siksha 'O' Anusandhan University, Bhubaneswar, with NIT Arunachal Pradesh. Talk on "Bifurcation and Fractal Pathways for Nonlinear Complexity".	Keynote Speaker
8	Prof. Rashmi Bhardwaj	12–13.09.2025 (online, 12.09.2025)	International Conference on Advanced Intelligent Sustainable Technologies, Materials and Infrastructure, Graphic Era (Deemed to be University) with University of Naples Parthenope, Italy. Paper: "Study of Global Freshwater Utilization Patterns through Fractal Dimension".	Oral presentation (co-author)
9	Prof. Rashmi Bhardwaj	17.10.2025 (1 day)	Centre for Clean Environment, Vellore Institute of Technology (VIT), Vellore. Talk on "Air and Water Quality Modeling".	Keynote Speaker
10	Prof. Rashmi Bhardwaj	31.10–02.11.2025 (3 days)	4th IEEE International Conference on Recent Smart Technologies in Engineering for Sustainable Development (DELCON), Department of Electrical Engineering, Jamia Millia Islamia, New Delhi. Two papers presented with Ph.D. scholars.	Oral presentations (co-author)
11	Prof. Rashmi Bhardwaj	20–22.11.2025 (3 days)	International Conference on Applied and Interdisciplinary Mathematical Sciences, A. H. Siddiqi Centre for Advanced Research in Applied Mathematics & Physics (CARAMP), Sharda University, Greater Noida. Six papers presented with Ph.D. scholars.	Oral presentations (co-author)
12	Prof. Rashmi Bhardwaj	01–05.12.2025 (talk 03.12.2025)	Five-day Faculty Development Programme on "Mathematical Computations and Applications" (MCA-2025), Department of Mathematics, Central University of Jammu (online). Talk on "Neuronal Wavelet Hybridized Fractal Modelling of COVID-19".	Plenary Speaker
13	Prof. Rashmi Bhardwaj	10–12.12.2025 (3 days)	70th Congress of Indian Society of Theoretical and Applied Mechanics (ISTAM-2025), VIT Bhopal University. Keynote talk on "Fractal Wavelet Neuronal Conjunction Analysis for Complex Systems"; two papers presented with Ph.D. scholars.	Keynote Speaker; Oral presentations (co-author)
14	Prof. Rashmi Bhardwaj	11–12.12.2025 (online, 12.12.2025)	Innovations in Mathematics: An International Conference on Research and Applications (IMICRA 2025), Tehatta Sadananda Mahavidyalaya, West Bengal. Paper on Caputo fractional model for atmospheric dispersion of pollutants.	Oral presentation (co-author)
15	Prof. Rashmi Bhardwaj	15–16.12.2025 (online, 16.12.2025)	International Conference on Advances of Differential Equations, Computational and AI-Driven Approaches and Pure Mathematics (ICADCA-25), Department of Mathematics, IIT Patna. Paper on time-fractional Navier–Stokes equations.	Oral presentation (co-author)
16	Prof. Rashmi Bhardwaj	22–24.12.2025 (3 days)	International Conference on Mathematical Analysis and its Applications (ICMAA-25), Department of Mathematics, South Asian University, New Delhi. Keynote talk on "Neuronal Wavelet Fractal Conjunction Optimization of Complex Systems"; six papers presented with Ph.D. scholars.	Keynote Speaker; Oral presentations (co-author)

S. No.	Name of faculty	Date &Duration	Details of Event (not more than 50 words)	Role of faculty (Chairperson/Invited Speakers/oral/Poster)
17	Prof. Rashmi Bhardwaj	29–31.12.2025 (3 days)	International Conference on Wetlands and Water Resources for Sustainable Development, NIT Patna. Two papers presented with Ph.D. scholars.	Oral presentations (co-author)
18	Prof. Rashmi Bhardwaj	21.01.2026 (1 day)	MATH'S FEST 2026, Department of Mathematics, J. C. Bose University of Science and Technology, YMCA, Faridabad. Talk on "Complexity Analysis for Real Life Applications".	Guest of Honour & Invited Speaker
19	Prof. Rashmi Bhardwaj	12–14.02.2026 (3 days)	2nd International Conference on Cognitive Computing in Engineering, Communications, Sciences and Biomedical Health Informatics (IC3ECSBHI-2026), School of Engineering, Gautam Buddha University, Greater Noida (IEEE). Two papers presented with Ph.D. scholars.	Oral presentations (co-author)
20	Prof. Rashmi Bhardwaj	16–18.02.2026 (3 days)	International Conference on Recent Trends in Mathematics and Computing (ICRTMC-2026), Department of Mathematics, Jamia Millia Islamia, New Delhi. Talk on "Neuronal Wavelet Fractal Conjunction Analysis for Complex Systems".	Invited Speaker
21	Prof. Rashmi Bhardwaj	19–20.02.2026 (2 days)	2nd International Conference on Sustainability and Technological Advancements in Engineering Domain (SUSTAINED-2026), Manav Rachna International Institute of Research and Studies, Faridabad (IEEE). Two papers presented with Ph.D. scholars.	Oral presentations (co-author)
22	Prof. Rashmi Bhardwaj	20–22.02.2026 (3 days)	International Conference of Mathematical Sciences and Computational Intelligence (ICMSCI 2026), PGDAV College, University of Delhi, with Faculty of Mathematical Sciences (DU), IIT Mandi and NIT Uttarakhand. Seven papers presented with Ph.D. scholars.	Oral presentations (co-author)
23	Prof. Rashmi Bhardwaj	26–27.02.2026 (2 days)	International Conference on Innovative Science, Engineering & Technology (ICISTECH 2.0), Amity School of Engineering & Technology, Amity University, Patna. Talk on "Wavelet Fractal Conjunction Optimal Analysis for Complex Systems".	Invited Speaker
24	Prof. Rashmi Bhardwaj	13–14.03.2026 (2 days)	Analytics Global Conference 2026, ASI Kolkata Chapter with Analytics Society of India, Kolkata. Two papers presented; awarded First Position in the Research Track.	Oral presentations (co-author); First Prize, Research Track
25	Anu Venugopala n	18th November 2025	Invited Talk at South Asian University New Delhi Faculty of Physical Sciences	Delivered a talk to Faculty, Students and Researchers at the Faculty of Physical Sciences, SAU, entitled "From Quanta to Qubits: Riding the Quantum Wave" on quantum mechanics and quantum computing followed by interactions

S. No.	Name of faculty	Date &Duration	Details of Event (not more than 50 words)	Role of faculty (Chairperson/Invited Speakers/oral/Poster)
26	Vaishali Singh	12-14 September 2025	International Conference on Nanostructured materials and nanocomposites (ICN-2025) organized by Mahatma Gandhi University, Kottayam, Kerala.	Invited Talk
27	Dr. Kriti Batra	15th June-19th June 2026	FDP On Cyber Security and Block Chain Technology	Attendee
28	Prof. Ram Shankar Gupta	20-22 November 2025	Osculating surfaces of non-null curves in minkowski 3-space (Conference Paper)	
29	Prof. Ram Shankar Gupta	16-18 February 2026	Osculating surfaces With Modified Orthogonal Frame In Euclidean 3-Space (Conference Paper)	
30	Prof. Ram Shankar Gupta	23rd February 2026	Killing Vector Fields In SOL^4 0"(Conference Paper)	
31	Prof. Ram Shankar Gupta	14th January 2026	Trajectory Ruled Surfaces By Franet Frame In E^3-I"(Conference Paper)	
32	Prof. Ram Shankar Gupta	20-22 February 2026	Trajectory Ruled Surfaces By Franet Frame In E^3-II"(Conference Paper)	

10. Awards/ Prizes / Achievements received by the faculty:

S. No.	Name of Faculty	Year	Details of Award (not more than 50words)	National /International	Prize
1	Prof. Rashmi Bhardwaj	2026	First Position in the Research Track at the Analytics Global Conference 2026 (13–14 March 2026, Kolkata), organised by ASI Kolkata Chapter in association with Analytics Society of India, with appreciation certificate.	National	Rs. 10,000/- and certificate
2	Prof. Satyabrata Mohapatra	2025	Figured in *World's Top 2% Scientists in Applied Physics* for the sixth consecutive year with Career All India Rank # 107 by *Stanford University, USA* & Elsevier (2025)	International	
3	Prof. Satyabrata Mohapatra	2025	Figured in *Top Scholars* with All India Rank # 12 (Lifetime)& World Rank #173 (Lifetime) in *Nanostructure*, All India Rank # 45 (Lifetime) & World Rank # 381 (Lifetime) in *Optical Properties* by *ScholarGPS* (2025)	International	
4	Prof. Satyabrata Mohapatra	2025	*Outstanding Researcher Award*, GGS Indraprastha University (2025)	International	
5	Prof. Satyabrata Mohapatra	2025	*Expert Member, Selection Committee, INSPIRE Faculty Fellowship* (IFF) Programme of DST (2025)	National	

11. Startups/Projects/ Grants/ Consultancy etc. received by the faculty:

S. No.	Name of Faculty	Title of the Project	Granting Agency	Period/ Duration	Amount (INR)

S. No.	Name of Faculty	Title of the Project	Granting Agency	Period/ Duration	Amount (INR)
1	Prof. Rashmi Bhardwaj	Development of Mathematical Modelling and Numerical Simulation of Carbon Nano Tube (CNT) based flow of Nanofluid (Nano Coolant) using Lattice Boltzmann Method	National Board of Higher Mathematics (NBHM), Department of Atomic Energy, Govt. of India	February 2022 – March 2026 (ongoing during report period)	16,80,900
2	Prof. Rashmi Bhardwaj	Development of Quantum Machine Learning for Astrophysical Real Time Data Analysis (Visiting Associateship)	Inter-University Centre for Astronomy and Astrophysics (IUCAA), Pune (Autonomous Institute of UGC)	01.08. 2023 – 31.07. 2026	—
3	Prof. Shruti Aggarwal (Mentor)	Development of novel Optically Stimulated Luminescence OSL-based detectors for medical dosimetry (diagnostic and radiotherapy) application	DST (WISE SCOPE) DST/WISESCOPE/HFN/2024/31	2025-2028	Rs 43,53,000/-
4	Prof. Tapan K Jain	Preparation of novel covalent organic frameworks with its surface modification for cancer theranostic purpose.	**G**GS IPU	1 Year	Rs. 2,00,000/=
5	Prof. S. Neeleshw	Quantum Size Efect in Mo-Doped Mn_4Si_7: Tuning Magnetic and Thermoelectric Properties	GGSIPU	2025-26 (18/06/25 to 31/03/26)	2,00,000/-
6	Prof. S. Neeleshwar	Disorder-induced enhancement of thermoelectric properties of a random array of SnSe quantum dots	DST SERB	2023-26 (13/10/23 to 13/10/26)	2996400/-
7	Prof. S. Neeleshwar	Prototype of air Ionization system	Instapower Ltd.	2025-2026 (24/06/25 to 23/06/26)	5,39,000/-
8	Prof. S. Neeleshwar	Devlopment of a miniatuzed high temperature heating element for advanced engeering and research application	Instapower Ltd.	2025-2026 (24/06/25-24/09/25)	3,63,000/-
9	Prof. Leena Khanna	FRGS 2025-26, F. 35(1)(1)/2025/RDC/2975/2 (Project Title: In silico screening and Synthesis of pyrimidine derivatives for Potential Biological application)	Guru Gobind Singh Indraprastha University	1 year (2025-26)	Rs. 2,00,0000/-

S. No.	Name of Faculty	Title of the Project	Granting Agency	Period/ Duration	Amount (INR)
10	Prof. Anjana Bagga	Study of Electron-Hole Asymmetry and Hidden Anisotropy in Graphene from Higher-Order Interactions: A Combined Tight-Binding and First Principles Study	FRGS, GGSIPU	June 2026-May 2027	Rs. 1,92500/-
11	Prof. Satyabrata Mohapatra	Development of $CoFe_2O_4$ based nanohybrids for application in hydroelectric cell for generation of green electricity	GGSIP University	1 Year (2025-2026)	2 Lakh
12	Dr. Mukesh Kumar	Development of MoS2–Graphene Hybrid Nanomaterials for High-Sensitivity Terahertz Detectors	FRGS	One Year	2.0 Lacs

12. Details of patents.

S. No.	Details of Patent	Published /Granted
1	Bhardwaj, Rashmi; Jayakumar, K. V.; Bhardwaj, Shivam. "Artificial Intelligence Based Sea Water and Ground Water Desalination Device". Indian Design Patent Application No. 416816-001; filed 14.05.2024; Patent Office Journal No. 04/2026.	Published (23.01.2026)
2	Bhardwaj, Rashmi; Datta, Debabrata; Jayakumar, K. V.; Bhardwaj, Shivam. "Water Quality Monitoring Device". Indian Design Patent Application No. 456593-001; filed 25.04.2025.	Filed 25.04.2025 (Published 17.07.2026, Journal No. 29/2026)
3.	NATURAL pH RESPONSIVE COLORIMETRIC INDICATOR FILMS COMPRISES OF CURCUMIN-SULPHUR NANOCRYSTALS-WHEAT GLUTEN FOR INTELLIGENT FOOD PACKAGING (Prof. Gulshan kumar)	202511096535 (Published)

13 Any e-content etc. developed by faculty.

Nil

PART -C: STUDENT DETAILS

14. Awards/ Prizes/ Achievements/ Scholarship received by the students participated as University representative:

S. No.	Name of the Student	Programme	Semester and Year	Details of Award (not more than 50 words)	National/International	Prize (if any)
1.	Vinita Sangwan	PhD		Best Research Paper Award at International Conference on Wetlands and Water Resources for Sustainable Development held at NIT-Patna (29.12.2025-31.12.2025)	International	

2.	Kajal Chaudhary	PhD		Best Oral Presentation Award at International Conference on Mathematical Sciences and Computational Intelligence held at PGDAV College, University of Delhi. (20.02.2026-22.02.2026)	International	
3.	Shagun Singh (Prof.Gulshan)	PhD (Chemistry)	IV and Second Year	First Position in National Science Day	National	
4.	Debolina Roy(Prof.Gulshan)	PhD (Chemistry)	II and First year	Third position in 'Best presentation Award' in ICRAM-2026 Conference	National	

15. Details of placements:

S.No.	Name of Company	Number of Students placed	Average Annual Package offered
1	Data scientist ministry of Stastics	Shanky Garg	
2	Guest faculty in DU	Inderjeet	

16. Details of Research Scholars: -

a) Total number of Ph.D. awardees during the report period 2025-2026:

S.No.	Name of Scholar	Title of Ph.D.	Name ofSupervisor	Date of final Registration	Date of Award of Degree
1	Dr. Shanky Garg	Multi-Farious Revenue Optimization	Prof. Rashmi Bhardwaj	30.11.2020	August 2025
2	Dr. Inderjeet Yadav	Approximation of the Numerical Solution(s) of Non-Linear Equations	Prof. Rashmi Bhardwaj	21.12.2021	March 2026
3	Mr. Abhishek Tiwari	Modelling and performance analysis of Hybrid solar photovoltaic-Thermoelectric generator and its application	Prof. Shruti Aggarwal	08/01/2018	
4	Dr. Kunal	Cobalt based two-dimensional hybrid and template grown systems: Synthesis and Application	August 2018	Prof. A. Datta & Prof. Tapan Sarkar (Co-Supervisor, USCT)	06.04.2026
5	Alka Singh	"Mesoporous metal oxides for gas sensing"	Prof. Vaishali Singh	01.12.2020	10.11.2025
6	Swati Gupta	Laccase Assisted Synthesis of Biological Important Scaffolds	Prof. Gulshan Kumar & Prof. A.K. Narula	2017	22.12.2025

S.No.	Name of Scholar	Title of Ph.D.	Name ofSupervisor	Date of final Registration	Date of Award of Degree
7	Saurav Kumar Maity	Synthesis, Characterization & Potential Applications of Graphene-Based Polymer Nanocomposites	Prof. Gulshan Kumar	2020	30.12.2025
8	Sweksha Srivastava	Cumulative Prospect Theory in Portfolio Optimization, Multi-Criteria Decision Analysis, and Data Envelopment Analysis	Prof. Abha Aggarwal	1-08-2019	24-03-2026
9	Simrandeep Kaur	Portfolio Optimization Using Machine Learning	Prof. Abha Aggarwal	1-12-2021	01-06-2026

b) Total number of Ph.D. scholars registered(ongoing):

07 (under the supervision **of Prof. Rashmi Bhardwaj**):

1. Ms. Vinita Sangwan (registered 23.08.2022)
2. Ms. Kajal Chaudhary (registered 23.08.2022)
3. Ms. Divisha Kansal (registered 23.08.2023)
4. Ms. Ekta Lamba (registered 23.08.2023)
5. Ms. Jyoti (registered 19.07.2024)
6. Ms. Surbhi Sharma (registered February 2025)
7. Ms. Ekta Prajapati (registered February 2026)

Prof. Anindaya Datta
Total number of Ph.D. scholars registered (ongoing): One: (Ms. Anita) (as Supervisor)
One (Ms. Shalini Pandey) (as Co-Supervisor)

Prof. Vaishali Singh
Total number of Ph.D. scholars registered(ongoing): 04

Prof.Tapan Jain
Total number of Ph.D. scholars registered (ongoing): Two (1. Priya Jha & 2. Sadhna Kaliramna)

Prof.Gulshan Kumar
Total number of Ph.D. scholars registered(ongoing): 06

S.No.	Name of Scholar	Title of Ph.D.	Name of Supervisor	Year of Registration
1.	Jyoti Dahiya	Synthesis of Carbohydrate-Derived Scaffolds as Potential Bioactive Agents	Prof. Gulshan Kumar & Prof. A.K. Narula	2021
2.	Krishna Kumar	Synthesis, characterization & Potential Applications of doped bio waste-based nanocomposites	Prof. Gulshan Kumar	2022
3.	Nikita	Synthesis and characterization of antimicrobial films for active packaging	Prof. Gulshan Kumar	2022
4.	Shagun Singh	Synthesis, characterization & Potential Applications of biopolymer-derived nanocomposites	Prof. Gulshan Kumar	2023
5.	Debolina Roy	Enzymeless Electrochemical Biosensor for Detection of Various Biomarkers	Prof. Gulshan Kumar	2024

6.	Tulsi Nagar	Title not decided yet	Prof. Gulshan Kumar	2026

Prof. Abha Aggarwal

Total number of Ph.D. scholars

S.No.	Name of Scholar	Title of Ph.D.	Name of Supervisor	Year of Registration	Part Time/Full Time
1	Rashmi	Machine Learning Techniques for Performance Prediction and Optimal Selection of Decision Making Units	Prof. Abha Aggarwal	Winter session 2024	Full Time
2	Mansi Sharma		Prof. Abha Aggarwal	Winter session 2025	Full Time

Prof. S. Neeleshwar

Total number of Ph.D. scholars registered (ongoing): 4

Prof.Yogesh Kumar Tyagi

Total number of Ph.D. scholars registered (ongoing): 05

Prof. Shipra Mital Gupta

Total number of Ph.D. scholars registered (ongoing): 05

Prof. Leena Khanna

Total number of Ph.D. scholars registered(ongoing): **5**

Prof .Ram Shankar Gupta

Total number of Ph.D. scholars registered(ongoing): 5

Prof. S. Mohapatra

Total number of Ph.D. scholars registered (ongoing): 02

Dr.Arif Ali Khan

Total number of Ph.D. registered research scholars (ongoing): 3

17.Details of JRF-NET/GATE Qualified Students

S. No.	Name of Student	Enrolment No.	Details of Test Qualified
1.	Vinita Sangwan(Prof.Rashmi Bhardwaj)		JRF-NET
2	Mr. Kunal (Prof.Anindya Datta)	03140890018	GATE 2020
3	Mansi Vats (Prof.Vaishali singh)	06940890021	GATE
4	Vinita Prof.Vaishali singh	10440890024	CSIR-JRF
5	Shelja Prof.Vaishali singh	15540890026	UGC-JRF

6	Saurav Kumar Maity(Prof.Gulshan Kumar)	05940890020	NET+GATE
7	Krishna Kumar(Prof.Gulshan Kumar)	08540890022	GATE
8	Nikita(Prof.Gulshan Kumar)	08840890022	NET+GATE
9	Shagun Singh(Prof.Gulshan Kumar)	09240890023	GATE
10	Charu Bhutani(Prof.Leena Khanna)	08640890022	GATE
11	Gourav Arora (Dr. Arif Ali Khan)		UGC ref. no.: 1875 (CSIR-UGC NET June 2019)
12	Priya Dahiya (Dr. Arif Ali Khan)		GATE 2022(CY22S43029435); (CSIR-UGC NET JRF-Dec. 2023)
13	Vani Verma (Dr. Arif Ali Khan)		STRF

18. Industrial visits/ educational tours undertaken during the report period 2025-2026: None

S. No.	Total no. of students visited	Dates of the tour	Place	Details of Tour (not more than 50 words)

19. Any event organized by the Any other significant achievement/activities of the school during period0 1.04.25 to 31.03.26:

Non-Linear Dynamics Research Lab, USBAS (Prof. Rashmi Bhardwaj):

- Two Ph.D. degrees awarded (August 2025 and March 2026); seven Ph.D. scholars currently registered.
- First Position in the Research Track at the Analytics Global Conference 2026, Kolkata (13–14 March 2026).
- Two Indian design patents (one published on 23.01.2026; one filed on 25.04.2025).
- Keynote, plenary and invited talks at national and international conferences, including South Asian University, ISTAM-2025 (VIT Bhopal), AMSE-2025 (SOA University), VIT Vellore and Jamia Millia Islamia.
- Life Member, Indian Society of Theoretical and Applied Mechanics (ISTAM), from 30.03.2026.

Date:

Name & Designation of Dean (USS)/
Head of the Department/ Director of Centre
Prof. (Dr.) Rashmi Bhardwaj
Dean, University School of Basic & Applied Sciences
Guru Gobind Singh Indraprastha University, Delhi

Note:

1. Maximum 2-3 photographs of the high resolution may be attached if required.
2. Kindly provide the Information for the given period as per the above format only. Incomplete information may not be considered.