

## Evaluative Report of Mathematics Department

1. **Name of the Department:** Mathematics
2. **Year of Establishment:** 1965
3. **Names of Programmes / Courses offered (UG, PG, M.Phil., Ph.D., Integrated Masters; Integrated Ph.D., etc.):** B.Sc. (H) Mathematics and B.A. (Prog.) Mathematics (Undergraduate Course)
4. **Names of Interdisciplinary courses and the departments/units involved:**

S. No.	Name of the Papers	Course Involved
1.	<b>Generic Elective for Honours</b> Sem-I Calculus Sem-II Linear Algebra	B.A. (Hons.) Economics, B.A.(Hons.) Business Economics, B.Com (Hons.), B.Sc. (Hons.) Home Science
2.	<b>Generic Elective for Honours</b> Sem-III Differential Equations Sem-IV Elements of Real Analysis	B.A. (Hons.) Economics, B.A.(Hons.) Business Economics, B.Com (Hons.)
3.	<b>Skill Enhancement Course</b> Sem III- Computer Algebra Systems Sem IV- Mathematical Typesetting System: Latex Sem V- Transportation and Network Flows Sem VI- Statistical Software- R	BA (Programme)
4.	<b>Generic Elective for B.A. Prog.</b> Sem V-General Mathematics- I Sem VI-General Mathematics-II	B.A. (Programme) and B.Com (Programme)
5.	<b>Core Course for B.A. Prog.</b> Sem I – Calculus Sem II- Algebra Sem III -Analytic Geometry and Applied Algebra Sem IV – Analysis	B.A. (Programme)
6.	<b>Discipline Specific Elective Course for B.A. Prog.</b> Sem V - Differential Equations Sem VI – Statistics	B.A. (Programme)

**5. Annual/ Semester/Choice based credit system (programme wise):**

LOCF System (B. Sc. (Hons) Mathematics - I Year, II Year and B.A. Programme – I Year, II Year)

CBCS System (B. Sc. (Hons) Mathematics - III Year and B.A. Programme - III Year)

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

S.N	Name	Qualifications	Designation	Specialization	No. of years of exp.	PhD. Students guided
1.	Dr. Asha G. Shankar	Dual Ph.D, D.I.C, Dual M.Sc.,M.Phil	Associate Professor (Retired on 30 September, 2014 )	Algebra, Numerical Analysis	41	-
2.	Dr. Bina Gupta	Ph.D. (Maths), M.A. (Maths) D.U.	Associate Professor (Retired on 31 May, 2017)	Mathematical Programming	39	-
3.	Dr. Beena R. Gupta	Ph.D. (Maths) D.U.	Associate Professor (Retired on 31 May, 2017 )	Differential Equations and Mechanics	42	01
4.	Mrs. Chitra Sharma	M.Phil. D.U., M.Sc.	Associate Professor		42	-
5.	Dr. Sudha Gupta	Ph.D.(Maths) D.U., M.A.(Maths) D.U.	Assistant Professor	Mathematical Programming	20	-
6.	Dr. Anu Chhabra	Ph.D (Maths) , M. Phil (Maths), D.U.	Assistant Professor	Algebraic Coding Theory	12	-
7.	Ms. Laxmi	M.Phil.(Maths) D.U. PhD (Maths) Pursuing	Assistant Professor	Evolutionary Game Theory	12	-
8.	Dr. Poonam Sarohe	PhD. (Maths) D.U., M.Phil.(Maths) D.U.	Assistant Professor	Algebra	13	-
9.	Ms. Anu Jain	M.Phil.(Maths) D.U., PhD (Maths) Pursuing	Assistant Professor	Computational Methods to Solve Differential Equations	12	-
10.	Dr. Talat Sultana	Ph.D.(Maths)-Jamia Millia Islamia, New Delhi M.Sc.(Maths)- MJPR, Bareilly, UP	Assistant Professor	Numerical Analysis, Differential Equations, Spline Functions, Boundary Value problems	08	01
11.	Dr. Guneet Bhatia	Ph.D.(Maths) D.U., M.Sc.(Maths) D.U.	Assistant Professor	Mathematical Programming	10	-
12.	Dr. Nisha Gupta	Ph.D.(Maths) D.U., M.Phil. D.U., M.A.(Maths)	Assistant Professor	Theory of Frames	12	-
13.	Ms. Poonam Jorwal	M.Sc.(Maths) IIT Delhi, Ph.D (Maths) Pursuing Mohanlal Sukhadiya University, Udaipur	Assistant Professor	Study of cosmological models with barotropic equation of state and dark energy for perfect	08	-

				fluid distribution in General Relativity		
14.	Ms. Mamta Godara	M.Sc. Maths D.U., CSIR –JRF (Net) Qualified 2018	Assistant Professor (Guest)	Applied Mathematics	0.5	-
15.	Dr. Anshul Gopal	Ph.D. (Maths) South Asian University, Delhi M.Sc. (Maths) DU.	Assistant Professor (Guest)	Nature Inspired Optimization Algorithms	03	-

**Academic Profile of Assistant Professors (in the period 2014-19) - No Ad-Hoc Faculty at present**

1.	Dr. Kumari Ranjana	Ph.D.(Maths), M.A. (Maths)	Assistant Professor (Ad-Hoc)	Space Dynamics and Celestial Mechanics	08	Nil
2.	Mr. Pradeep Kumar	M.Phil. (Maths), Ph. D Pursuing	Assistant Professor (Ad-Hoc)	A Study of Effect of Temperature on Brain Tumor	09	Nil
3.	Ms. Preeti Gupta	M.Phil. (Maths), Ph. D Pursuing	Assistant Professor (Ad-Hoc)	Mathematical Programming	02	Nil
4.	Ms. Savita Rani	M.Phil. (Maths), Ph. D Pursuing	Assistant Professor (Ad-Hoc)	Functional Analysis	03	Nil
5.	Dr. Megha Gupta	Ph. D in Operations Research, Bundelkhand University, Jhansi	Assistant Professor (Ad-Hoc)	Operations Research	02	Nil
6.	Ms. Divya Saigal	M.A. Maths D.U., UGC – JRF	Assistant Professor (Ad-Hoc)	Applied Mathematics	02	Nil
7.	Ms. Sunita Sharma	M.Phil. (Maths), Ph. D Pursuing	Assistant Professor (Ad-Hoc)	Dynamic Optimization	15	Nil

**7. Number of academic support staff (technical) and administrative staff; sanctioned & filled:**

S. N.	Sub Department	Count
1.	Academic Support Staff (Technical Computer Lab)	01
2.	Administrative Staff	Nil

**8. Qualifications of teaching faculty with D.Sc. / D.Litt. / Ph.D. / M.Phil. / PG.:**

S. N.	Qualification	Count
1.	D. Sc.	Nil
2.	D. Litt.	Nil
3.	Ph. D	8
4.	M. Phil	2
5.	PG.	2

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

Name of the Faculty	Project Title	Funding Agency	Grant Sanctioned	PI / Co-PI
Dr. Talat Sultana	Computational Techniques for Solving PDEs with Applications to Engineering Problems approved under “ TEQIP Collaborative Research Scheme”	National Project Implementation Unit	3,48,000	Co-PI

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

**11. Ph. D Supervisors / Research Guides recognized by the University – 02**

Name of the Faculty	University	Supervisor/ Co-Supervisor
<b>Dr. Beena R. Gupta</b>	Department of Mathematics, University of Delhi, Delhi.	Supervisor
<b>Dr. Talat Sultana</b>	Department of Mathematics, Faculty of Natural Sciences, Jamia Milia Islamia	Co-Supervisor

**12. Publications (during the period 2014-2020) :**

*a. Publication per faculty*

Books Edited	Faculty Name
Proceedings of the National Conferences sponsored by UGC & CSIR- Proceedings of the National Seminar on Optimization and its Application 2015; KK Publisher-ISBN/978-81-7844-229-9.	<b>Dr. Beena R. Gupta (Retd.)</b>

Title of paper/ book	Authors	Name of Journal	Year of publication	ISBN/ISSN number
A novel neighborhood archives embedded gravitational constant in GSA	Dr. Susheel Joshi, <b>Dr. Anshul Gopal</b> , Shitu Singh, Dr. J.C.Bansal	Soft Computing	2021	ISSN 1433-7479
On stability analysis of particle swarm optimization algorithm	<b>Dr. Anshul Gopal</b> , M.M.Sultani, Dr. J.C.Bansal	Arabian Journal of Science and Engineering	2020	ISSN 2191-4281
Magnetized bianchi type-VI <sub>0</sub> cosmological model for barotropic fluid distribution with variable magnetic permeability and dark energy	<b>Poonam Jorwal</b> Prof. Atul Tyagi Dr. Dharendra Chhajed	Journal of Rajasthan Academy of Physical Sciences	2020	ISSN 0972-6306

Tension spline technique for the solution of fourth-order parabolic partial differential equation	<b>Dr. Talat Sultana,</b> Pooja Khandelwal	Malaya Journal of Matematik 6 (3), 514-520, University Press, Singapore.	2018	ISSN 2319-3786
A new non-polynomial spline method for solution of linear and non-linear third order dispersive equations	<b>Dr. Talat Sultana,</b> Dr. Arshad Khan and Pooja Khandelwal	Advances in Difference Equations, <a href="https://doi.org/10.1186/s13662-018-1763-z">https://doi.org/10.1186/s13662-018-1763-z</a> , Springer Open, UK.	2018	ISSN: 1687-1839 (print); 1687-1847 (web)
Analysing convergence, consistency and trajectory of ABC algorithm	Dr. J.C.Bansal <b>Dr. Anshul Gopal</b>	IEEE Access	2018	ISSN 2169-3536
Stability analysis of ABC optimization algorithm	Dr. J.C.Bansal <b>Dr. Anshul Gopal</b>	Swarm and Evolutionary Computation	2018	ISSN 2210-6502
Generalized Multi-Stage Optional Unrelated Question RRT model	Prof. B.K.Das <b>Dr. Anu Chhabra</b>	Statistics and Applications	2017	ISSN 2452-7395
Generalizations of Primes and Primary Ideals in Commutative Semirings	Dr. Manish Kant Dubey, <b>Dr. Poonam Sarohe</b>	South Asian Bulletin of Mathematics 41, 9-20	2017	ISSN: 0129-2021
On primes and primary avoidance theorem for subsemimodules	Dr. Manish Kant Dubey, <b>Dr. Poonam Sarohe</b>	Quasigroups and Related Systems 25, 221-229.	2017	ISSN: 1561-2848
Numerical Simulation of the Phase Space of Jupiter-Europa System Including the Effect of Oblateness	Vinay Kumar, <b>Dr. Beena R. Gupta,</b> Rajiv Aggarwal	Application and Applied Mathematics, 12, pp. 479-495	2017	ISSN: 1932-9466
Multi-Stage Optional Unrelated Question Randomized Response Model	<b>Dr. Anu Chhabra,</b> Prof. B.K. Dass, Dr. Samridhi Mehta	Journal of Statistical Theory and Applications 15 (1), 80-95.	2016	ISSN: 1538-7887
An optional unrelated question RRT model	Dr. Jeong S. Sihm, <b>Dr. Anu Chhabra,</b> and Dr. Sat N. Gupta	INVOLVE 9 (2), 195-209	2016	ISSN: 1944-4176
Estimating Prevalence of Sexual Abuse by an Acquaintance with an Optional Unrelated Question RRT model	<b>Dr. Anu Chhabra,</b> Prof. B. K. Dass, Prof. Sat Gupta	North Carolina Journal of Mathematics and Statistics 2, 1-9	2016	ISSN: 2380-7539
Parametric Septic Spline Solution for Some Ordinary Differential Equations occurring in Plate Deflection Theory	Dr. Arshad Khan, <b>Dr. Talat Sultana</b>	International Journal of Nonlinear Science 21(2), 67-79	2016	ISSN 1749-3889 (Print), ISSN 1749-3897 (Online).
On 2-absorbing ideals in commutative semirings	Dr. Pratibha Kumar, Dr. Manish Kant Dubey and <b>Dr. Poonam Sarohe</b>	Quasigroups and Related Systems 24, 67-74	2016	ISSN 1561-2848

Numerical solution of fourth order parabolic partial differential equation using parametric septic splines	Dr. Arshad Khan, <b>Dr. Talat Sultana</b>	Hacettepe Journal of Mathematics and Statistics 4 (45), 1067-1082.	2016	ISSN 1303-5010
On 2-absorbing primary ideals in commutative semirings	Dr. Pratibha Kumar, Dr. Manish Kant Dubey, <b>Dr. Poonam Sarohe</b>	European Journal of Pure and Applied Mathematics 9(2), 186-195	2016	ISSN: 1307-5543
Numerical Investigation of A Star's Trajectory in Binary Quasar System	Vinay Kumar, <b>Dr. Beena R. Gupta</b> and Rajiv Aggarwal	Advanced Studies in Contemporary Mathematics, 3, pp. 385-399	2016	ISSN 1229-3067
Characterization of the Phase Space Structure of Circular Restricted Three-Body Problem: An Alternative Approach	<b>Dr. Beena R. Gupta</b> , Vinay Kumar	International Journal Of Bifurcation and Chaos, 26(02), 1650029	2016	ISSN: 0218-1274
On $(n-1, n)$ -phi-prime ideals in semirings	Dr. Manish Kant Dubey and <b>Dr. Poonam Sarohe</b>	MATEMATIČKI VESNIK, 67, 3(2015), 222-232	2015	ISSN 2406-0682
Vector optimization involving generalized semilocally pre-invex functions	<b>Dr. Sudha Gupta</b> , Dr. Vani Sharma, Mamta Chaudhary	Journal of Applied Mathematics and Informatics 3(4), 235-246.	2015	ISSN: 1598-5857
A spline method for solving fourth order singularly perturbed boundary value problem,	<b>Dr. Talat Sultana</b>	Malaya Journal of Matematik, 3, 1(2015) 51-61, University Press, Singapore.	2015	ISSN: 2319-3786
Some results on 2-absorbing ideals in commutative semirings	Dr. Pratibha Kumar, Dr. Manish Kant Dubey, <b>Dr. Poonam Sarohe</b>	Journal of Mathematics and Applications 38, 77-84	2015	ISSN 2300-9926
On 2-absorbing subsemimodules over commutative semirings	Dr. Manish Kant Dubey, <b>Dr. Poonam Sarohe</b>	Buletinul Academiei De Stiinte- A Republich Moldova, Mathematica, 2 (78), 27-35	2015	ISSN:1024-7696
Time-Frequency Analysis of Asymmetric Triaxial Galaxy Model Including Effect of Spherical Dark Halo Component	<b>Dr. Beena R. Gupta</b> , Vinay Kumar	International Journal of Astronomy and Astrophysics, 5(02), Article ID: 57070	2015	ISSN: 2161-4717
A book for university level students titled "Algebra I (A Basic Course)", Ane Books Pvt Ltd (2014).	<b>Dr. Asha G. Shankar (Retd.)</b>		2014	<b>ISBN</b>
Characterizations for the set of Higher Order Global Strict Minimizers	Rishi R. Sahay and <b>Dr. Guneet Bhatia</b>	Journal of Nonlinear and Convex Analysis	2014	ISSN: 1345-4773

**Summary of Faculty Publication Profile (2014 onwards)**

	<b>Books Authored</b>	<b>Books Reviewed</b>	<b>Papers/ Articles Published</b>	<b>Citation</b>	<b>Books Edited</b>
<b>International</b>	-	-	<b>26</b>	<b>272</b>	-
<b>National</b>	<b>01</b>	-	<b>01</b>	-	<b>01</b>

**13. Areas of consultancy and income generated:** None

**14. Faculty as members in:**

<b>1.</b>	<b>Dr. Talat Sultana</b>
	<ul style="list-style-type: none"> <li>• Ramanujan Mathematica Society, India. (National Committee)</li> <li>• International Association of Engineers (IAENG), Hong Kong. (International Committee)</li> </ul>
<b>2.</b>	<b>Dr. Guneet Bhatia</b>
	<ul style="list-style-type: none"> <li>• Working group on Generalized Convexity and Monotonicity (International Committee)</li> <li>• Seminar group of Mathematical programming, University of Delhi (National Committee)</li> </ul>
<b>3.</b>	<b>Ms. Poonam Jorwal</b>
	<ul style="list-style-type: none"> <li>• Member of Indian Mathematical Society</li> </ul>
<b>4.</b>	<b>Dr. Anshul Gopal</b>
	<ul style="list-style-type: none"> <li>• Soft Computing Research Society (SCRS)</li> </ul>

**15. Student Projects:**

- a. *Percentage of students who have done in-house projects including inter-Departmental/ programme:* None
- b. *Percentage of students placed for projects in organizations outside the Institution i.e.in Research laboratories/Industry/ other agencies:* None

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

<b>1.</b>	<b>Dr. Asha G. Shankar (Retd.)</b>
	<ul style="list-style-type: none"> <li>• In February 2011 was chosen by Friendship Forum of India for “Mahila Shree Award” which was conferred upon her by Dr. G.V.G. Krishnamurthy, Former Election Commissioner of India</li> <li>• Awarded “Shiksha Rattan Puraskar” by India International Friendship Society for which was conferred upon her by Dr. Bhishma Narain Singh, Former Governor of Tamil Nadu and Assam, on 21st Jan 2011.</li> <li>• In September 2010 she was chosen by Friendship Forum of India for “Bharat Excellence Award and Gold Medal” which was conferred upon her by Dr. G.V.G. Krishnamurthy,</li> </ul>

	<p>Former Election Commissioner of India.</p> <ul style="list-style-type: none"> <li>• Nominated by the Vice Chancellor, University of Delhi to be honoured as “Teacher of Excellence”, which was conferred by Dr. A.P.J. Abdul Kalam, former President of India on 7th Sep 2009.</li> <li>• Commonwealth Academic Staff Scholarship for Doctoral studies in UK (1976).</li> <li>• Commonwealth Scholarship for Doctoral studies in UK (1974). Not availed of.</li> <li>• Chancellor’s Medal in M.Phil (1972).</li> <li>• Triple Gold Medalist in B.Sc. (Hons) Maths , Delhi University)(1969)</li> <li>• I st Academic Prize Ramjas College, Delhi University in 1967, 1968, 1969.</li> <li>• National Science Talent Scholarship awarded by NCERT (1966) for a period of 9 years.</li> </ul> <p>Availed only for 7years.</p>
<b>2.</b>	<b>Dr. Beena R. Gupta (Retd.)</b>
	<ul style="list-style-type: none"> <li>• Appointed Examiner for the Evaluation of Four Ph.D. thesis by Department of Maths., Jamia Millia Islamia University &amp; Bhagalpur University and Panel Examiner of IGNOU for paper setting and evaluation.</li> </ul>
<b>3.</b>	<b>Dr. Bina Gupta (Retd.)</b>
	<ul style="list-style-type: none"> <li>• Awarded Gold Medal for “Best Woman Candidate” in M. A Mathematics,1974, D.U.</li> </ul>
<b>4.</b>	<b>Mrs. Chitra Sharma</b>
	<ul style="list-style-type: none"> <li>• Awarded Merit Scholarship in Post-Graduation.</li> </ul>
<b>5.</b>	<b>Dr. Sudha Gupta</b>
	<ul style="list-style-type: none"> <li>• Awarded Gold medal by Maitreyi College, DU for securing I position in M.A. Maths.</li> <li>• Awarded SRF from CSIR (1993-1996).</li> </ul>
<b>6.</b>	<b>Dr. Talat Sultana</b>
	<ul style="list-style-type: none"> <li>• Awarded Post-Doctoral Fellowship by National Board of Higher Mathematics in December 2012.</li> </ul>
<b>7.</b>	<b>Ms. Laxmi</b>
	<ul style="list-style-type: none"> <li>• Recipient of South Campus Endowment scholarship</li> <li>• Secured 1<sup>st</sup> rank in B.Sc. at Dayal Singh college, D.U.</li> </ul>
<b>8.</b>	<b>Dr. Nisha Gupta</b>
	<ul style="list-style-type: none"> <li>• Secured 3<sup>rd</sup> position in DU in M.Sc.</li> <li>• Secured 2<sup>nd</sup> position in S.P.M. College for Women in B.Sc.</li> <li>• Certificate of honor for being a meritorious alumni of Shyama Prasad Mukherji College for Women, D.U.</li> </ul>
<b>9.</b>	<b>Dr. Anu Chhabra</b>
	<ul style="list-style-type: none"> <li>• Secured 1<sup>st</sup> position in KMC college, DU, in B.Sc. (H) Maths</li> <li>• Secured 1<sup>st</sup> position in KMC college, DU, in M.Sc. Maths</li> </ul>
<b>10.</b>	<b>Ms. Poonam Jorwal</b>
	<ul style="list-style-type: none"> <li>• Secured Vth position all over University in Graduation</li> </ul>
<b>11.</b>	<b>Ms. Mamta Godara</b>
	<ul style="list-style-type: none"> <li>• Inspire Scholar</li> <li>• Certificate of Excellence, Indra Priyadarshani Purushkar</li> </ul>

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

<b>Name</b>	<b>Affiliation</b>	<b>Year of Visit</b>
<b>Dr. Vishnu Narayan Mishra</b>	Head, Department of Mathematics, Indira Gandhi National Tribal University	2021
<b>Dr. Samit Bhattacharyya</b>	Shiv Nadar University	2021
<b>Dr. Shikha Pandey</b>	School of Advance Studies, VIT-AP	2021
<b>Mr. Anil Singh Bhadauria</b>	T.I.M.E. Institute	2021
<b>Dr. Gajendra Pratap Singh</b>	Jawaharlal Nehru University	2020
<b>Prof. Riddhi Shah</b>	Jawaharlal Nehru University	2019
<b>Prof. Shobha Bagai</b>	Cluster Innovation Center, University of Delhi	2019
<b>Dr. Indivar Gupta</b>	Senior Scientist, Defence Research and Development Organization, Delhi	2018
<b>Dr Sangeeta Sharma Dhaor</b>	Department of Social Work, Dr. Bhim Rao Ambedkar College, University of Delhi	2018
<b>Prof. Ajit Iqbal Singh</b>	Honorary Scientist, Indian National Science Academy	2017
<b>Prof. A.K Nandakumaran</b>	Department of Mathematics, Indian Statistical Institute, Bangalore.	2017
<b>Prof.V.D. Sharma</b>	Department of Mathematics, Indian Institute of Technology, Mumbai	2017
<b>Prof. Subhendu Ghosh</b>	Department of Bio-Physics, University of Delhi.	2017
<b>Dr. Gurpreet Tuteja</b>	Deputy Dean, Students Welfare, University of Delhi	2016
<b>Dr. Asha G. Shankar</b>	Retired, Lakshmibai College, University of Delhi	2016
<b>Prof. S.K. Neogy</b>	Indian Statistical Institute, Delhi.	2015
<b>Prof. C.S. Lalitha</b>	Department of Mathematics, South Campus, University of Delhi	2015
<b>Prof. Aparna Mehra</b>	Department of Mathematics, Indian Institute of Technology, Delhi.	2015
<b>Prof. Pankaj Gupta</b>	Department of Operational Research, University of Delhi.	2015
<b>Dr. Mukesh Mehlawat</b>	Department of Operational Research, University of Delhi.	2015
<b>Prof. Ravichandran</b>	Department of Mathematics, University of Delhi	2014

**18. Seminars/ Conferences/Workshops organized & the source of funding:**

<b>Faculty Members</b>	<b>Name of the Event</b>	<b>Date</b>	<b>Funding Agency</b>
<b>Ms. Laxmi Bhati (Coordinator)</b>	Science Academies Lecture Workshop on “Differential Equations and Mathematical Modelling”	September 27-29, 2017	Workshop Sponsored by Joint Science Education panel of the three

			academies, National Academy of Sciences, Allahabad, Indian National Science Academy, New Delhi and Indian Academy of Sciences, Bangalore
<b>Dr. Beena R. Gupta (Convener) and Dr. Sudha Gupta (Convener)</b>	National Seminar on “Optimization and its Applications”.	January 15-16, 2015.	University Grants Commission (UGC)

**19. Diversity of Students:**

Year	Course	No. of students from Delhi	No. of outstation students	No. of international students	Total
Year I	B.A. (Honors)	14	32	NIL	46
Year II	B.A. (Honors)	11	43	NIL	54
Year III	B.A. (Honors)	8	38	NIL	46

**20. How many students have cleared national and state competitive examinations such as NET, SLET, GATE, Civil services, Defense services, etc.: ( Graduates of 2018 -2020)**

S. No.	Competitive Examinations	No. of students
1.	Joint Admission Test for M. Sc. (JAM) conducted jointly by Indian Institute of Technology and Indian Institute of Science	8
2.	Entrance Exam for admission to M.Sc. Operations Research conducted by Department of Operations Research, University of Delhi.	6
3.	Guru Gobind Singh Indraprastha University Common Entrance Test (CET) for MBA IT	1
4.	National Eligibility Test (NET) by CSIR-UGC 2019	1
5.	CAT-2019	1
6.	State Bank of India Clerk Exam for Post of Junior Associate - 2018	1
7.	Banaras Hindu University (BHU) – Master of Computer Applications (MCA) (2018)	1
8.	Guru Gobind Singh Indraprastha University Common Entrance Test (CET) for MCA	1
9.	Entrance Exam for MAED course conducted by Ambedkar Univeristy	1

**21. Student Progression:**

NAME	GRADUATED YEAR	COURSE AND INSTITUTE	JOB PROFILE
Asmita Jain	2020	Pursuing M.Sc. Mathematics, Delhi University	NA
Ritika Goel	2020	Pursuing M.Sc. Mathematics. Indian Institute of Technology, Gandhi Nagar	NA
Muskan	2020	Innovalance Learning Sysytem Pvt. Lmt.	Subject Matter Expert in Mathematics
Pooja Verma	2020	Pursuing M.Sc. in Mathematics, DU	NA
Preeti Rani	2020	Pursuing Master in Operational Research, DU	NA
Muskan Goyal	2020	Pursuing Master in Operational Research, DU Pursuing Master in Actrial Science, UK	NA
Anjali	2020	Pursuing M.Sc. in Mathematics, DU	NA
Manshi	2020	Pursuing M.Sc. in Mathematics, DU	NA
Nitika Garg	2020	Pursuing M.Sc. in Mathematics, DU	NA
Shubhi Gupta	2020	Pursuing Master in Operational Research, DU	NA
Vaishnavi Rastogi	2019	M.Sc.(Mathematics), Indian Institute of Technology, Khargapur, West Bengal	NA
Anugya Sahu	2019	M.Sc. Mathematics, Indian Institute of Technology Delhi, New Delhi	NA
Shruti Singh	2019	M.Sc.(Mathematics and Scientific Computing), National Institute of Technology, Warnagal, Telangana	NA
Manisha	2019	M. Sc. Mathematics, DU	NA
Archita Tiwari	2019	M.Sc. Mathematics, Indian Institute of Technology, Bhubaneshwar	NA
Jyotsna Ambast	2019	Masters of Science in Mathematics, National Institute Of Technology, Rourkela	NA
Ankita	2019	M.Sc. Operations Research, Department of Operational Research, University of Delhi.	NA
Jhanvi Mehta	2019	M.Sc. Operations Research, Department of Operational Research, University of Delhi.	NA
Sheetal Kumari	2019	M. Sc. Mathematics, University of Delhi.	NA

Kusum	2019	M. Sc. Mathematics, University of Delhi.	NA
Gitika Duggal	2019	M. Sc. Mathematics, University of Delhi.	NA
Kirti Rani	2019	M.A. Mathematics, Delhi Technological University.	NA
Anu Jain	2019	IIM, Rohtak, Haryana	NA
Vaishali Rani	2018	M.Sc. Mathematics, National Institute of Technology, Warangal	NA
Srishti Khaiwal	2018	M.Sc Mathematics and Computing, Thapar institute of engineering and technology Patiala, Punjab	NA
Prachi Saini	2018	M. Sc. Mathematics, DU Qualified CSIR Net	NA
Muskan	2018	M.Sc. OR Department of Operational Research, Delhi University	NA
Aastha Gupta	2018	Masters in Computer Applications (MCA) Bharati Vidyapeeth's Institute of Computer Applications and Management (BVICAM), GGSIPU	NA
Riddhi Jangid	2018	M. Sc. Amity University	NA
Shruti Yadav	2018	Masters in Environment and Development. Ambedkar University Delhi	NA
Ankita Tripathi	2018	D.El.Ed. District institute of education and training	DIET Pupil Teacher
Ayushi Goel	2018	D.I.E.T Bulandshahr	Trainee
Renu	2018	M.Sc. Mathematics All India Jaat Heroes Memorial College , Rohtak Haryana	NA
Tanya	2018	M.Sc. Mathematics Maharishi Dayanand University, Rohtak Haryana	NA
Vaishali Tiwari	2018	M.Sc. Mathematics, Chaudhary Charan Singh University	NA
Abhilasha Jain	2018	State Bank of India	Junior Associate

**22. Details of infrastructural facilities:** Wi-Fi is available for all (Staff & Students) and One Classroom with Projector , Computer Lab

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

Name of the Event	Date of the Event
<p>A webinar on “<b>Some Topics in Mathematics</b>” was organized for all the students of Mathematics Department to explain them about the topics of Real Analysis, Algebra and Multivariate Calculus.</p> <p><b>Organized By: Dr. Talat Sultana</b></p>	<p><b>February 26-27, 2021</b></p>
<p>A webinar on “<b>Government Jobs by T.I.M.E. Institute</b>” was organized for all the students of Mathematics Department as well as different college students to make them familiar about Government Jobs like UPSC, bank jobs etc.</p> <p><b>Organized By: Dr. Talat Sultana</b></p>	<p><b>January 20, 2021</b></p>
<p>A webinar on “<b>Building Models and Understanding Covid-19 Pandemic</b>” was organized for students to make them aware about the current situation of our surroundings and society regarding the COVID-19.</p> <p><b>Organized By: Dr. Talat Sultana</b></p>	<p><b>January 4, 2021</b></p>
<p>A webinar on “<b>Career Guidance</b>” for the students with mathematics background was organized by</p> <p><b>Ms. Anu Jain.</b></p>	<p><b>May 16, 2020</b></p>
<p>A lecture “<b>From Tricks to Techniques in Mathematics</b>” delivered by Professor Shobha Bagai, Cluster Innovation Center, University of Delhi.</p>	<p><b>November 15, 2019</b></p>
<p>A lecture on “<b>Dynamics</b>” delivered by Prof. Riddhi Shah, Head, School of Physical Sciences, JNU and Chair of IWM (Indian Women and Mathematics) organized by Ms. Laxmi, Teacher In-Charge.</p>	<p><b>March 14, 2019</b></p>
<p>A lecture on “<b>Algebra and Number Theory for Cryptography</b>” delivered by <b>Mr Indivar Gupta</b>, Scientist F, DRDO, organized by Teacher In-Charge, <b>Ms. Laxmi.</b></p>	<p><b>November 2, 2018</b></p>

Three day lecture workshop on “ <b>Differential Equations and Mathematical Modelling</b> ” sponsored by the Science Academies’ (for undergraduates) co-ordinated by <b>Ms. Laxmi</b> , under the guidance of the Convener Prof. (Ms.) Ajit Iqbal Singh, Emeritus Scientist, INSA at Lakshmbai College, University of Delhi.	<b>September 27-29, 2017</b>
Screening of the movie- “ <b>The Man who knew Infinity</b> ” to motivate the students.	<b>January 17, 2017</b>
A guidance lecture on diverse and innovative career options available for graduate students of our department, by <b>Dr. Gurpreet Tuteja</b> , Deputy Dean Students Welfare, University of Delhi and <b>Dr. Asha G. Shankar</b> , our Ex-Faculty Member, organized by <b>Dr. Sudha Gupta, Teacher In-Charge.</b>	<b>October 24, 2016</b>
National Seminar on “ <b>Optimization and its Applications</b> ” organized by Dr. Beena R. Gupta and Dr. Sudha Gupta.	<b>January 15-16, 2015</b>
An invited talk on by <b>Prof. Ravichandran</b> , Department of Mathematics, University of Delhi entitled “ <b>Fallacies in Mathematics</b> ”, organized by <b>Dr. Anu Chhabra</b> , Teacher-In Charge.	<b>2014</b>

**24. Teaching methods adopted to improve student learning:-**

The computer lab has a LCD projector for power point presentations required for teaching. The internet connectivity through Wi-Fi is used to share latest developments in the areas of Mathematics with the students.

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

**26. SWOC analysis of the department and Future plans:**

<b><u>Strengths</u></b> <ul style="list-style-type: none"> <li>○ Dedicated and Supportive Teachers</li> <li>○ Leveraging technological platforms to interact with students</li> </ul>	<b><u>Weakness</u></b> <ul style="list-style-type: none"> <li>○ Low focus on research projects led by students</li> <li>○ Fewer optional papers are being offered to the students.</li> </ul>
<b><u>Opportunities</u></b> <ul style="list-style-type: none"> <li>○ Building stronger corporate- student tie up to drive research</li> <li>○ Emphasis on building labs</li> <li>○ Focusing on latest fields like financial</li> </ul>	<b><u>Challenges</u></b> <ul style="list-style-type: none"> <li>○ Additional infrastructure requirements</li> <li>○ Funds to build international exchange programmes to inculcate global best practices</li> </ul>

mathematics, Actuarial sciences & informatics amongst others.	
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### **Future Plans**

- ▶ The department intends to organize seminars and workshops in order make the students well-versed with the upcoming Applications of Mathematics in other diverse disciplines such as Economics, Finance, Biotechnology, Genetics, and many more.
- ▶ Installation of projectors in the class rooms to enable teaching via the power point presentations. Such methodology will bring about EFFECTIVE teaching and learning atmosphere.
- ▶ To improve the software skills of the students, workshops on Mathematics based software packages such as SPSS and MATLAB should be conducted.
- ▶ Educational trips to reputed institutions such as IISC, TIFR, ISI, DRDO can be organized to enlighten the students regarding the various avenues and courses offered by these institutions for their future academic career.
- ▶ Inclusion of Mathematical research journals in the college library to promote the development of research aptitude in the students.
- ▶ Intent to offer more optional papers to the students that are customized to their aptitude and interest to enhance their viability in the job market