HINDU COLLEGE
University of Delhi

Course Outcomes – Program Outcomes (COPO) Mapping and Attainment

Program Outcomes (PO): B.Sc. (H) Mathematics

PO1: Communicate mathematics effectively by written, computational and graphic means.
PO2: Create mathematical ideas from basic axioms.
PO3: Gauge the hypothesis, theories, techniques and proofs provisionally.
PO4: Utilize mathematics to solve theoretical and applied problems by critical understanding, analysis and synthesis.
PO5: Identify applications of mathematics in other disciplines and in the real-world, leading to enhancement of career prospects in a plethora of fields and research.

Course Outcomes (CO): B.Sc. (H) Mathematics

Sem	Code	Course	CO	Statement
I	32351101	Calculus	CO1	Learn first and second derivative tests for relative extrema and apply the knowledge in problems in business, economics and life sciences.
			CO2	Sketch curves in a plane using its mathematical properties in the different coordinate systems of reference.
			CO3	Compute area of surfaces of revolution and the volume of solids by integrating over cross-sectional areas.
			CO4	Understand the calculus of vector functions and its use to develop the basic principles of planetary motion.
II	32351201	Real Analysis	CO1	Understand many properties of the real line R, including completeness and Archimedean properties.
			CO2	Learn to define sequences in terms of functions from N to a subset of R.
			CO3	Recognize bounded, convergent, divergent, Cauchy and monotonic sequences and to calculate their limit superior, limit inferior, and the limit of a bounded sequence.
			CO4	Apply the ratio, root, alternating series and limit comparison tests for convergence and absolute convergence of an infinite series of real numbers.
III	32351301	Theory Of Real Functions	CO1	Have a rigorous understanding of the concept of limit of a function.
			CO2	Learn about continuity and uniform continuity of functions defined on intervals.
			CO3	Understand geometrical properties of continuous functions on closed and bounded intervals.
			CO4	Learn extensively about the concept of differentiability using limits, leading to a better understanding for applications.

			CO5	Know about applications of mean value theorems and Taylor's theorem.
IV	32351401	Partial Differential Equations	CO1	Formulate, classify and transform first order PDEs into canonical form.
			CO2	Learn about method of characteristics and separation of variables to solve first order PDE's.
			CO3	Classify and solve second order linear PDEs.
			CO4	Learn about Cauchy problem for second order PDE and homogeneous and non-homogeneous wave equations.
			CO5	Apply the method of separation of variables for solving many well-known second order PDEs.
V	32351501	Metric Spaces	CO1	Learn various natural and abstract formulations of distance on the sets of usual or unusual entities. Become aware one such formulations leading to metric spaces.
			CO2	Analyse how a theory advances from a particular frame to a general frame.
			CO3	Appreciate the mathematical understanding of various geometrical concepts, viz. balls or connected sets etc. in an abstract setting.
			CO4	Know about Banach fixed point theorem, whose far-reaching consequences have resulted into an independent branch of study in analysis, known as fixed point theory.
			CO5	Learn about the two important topological properties, namely connectedness and compactness of metric spaces.
VI	32351601	Complex Analysis	CO1	Learn the significance of differentiability of complex functions leading to the understanding of Cauchy−Riemann equations.
			CO2	Learn some elementary functions and valuate the contour integrals.
			CO3	Understand the role of Cauchy−Goursat theorem and the Cauchy integral formula.
			CO4	Expand some simple functions as their Taylor and Laurent series, classify the nature of singularities, find residues and apply Cauchy Residue theorem to evaluate integrals.

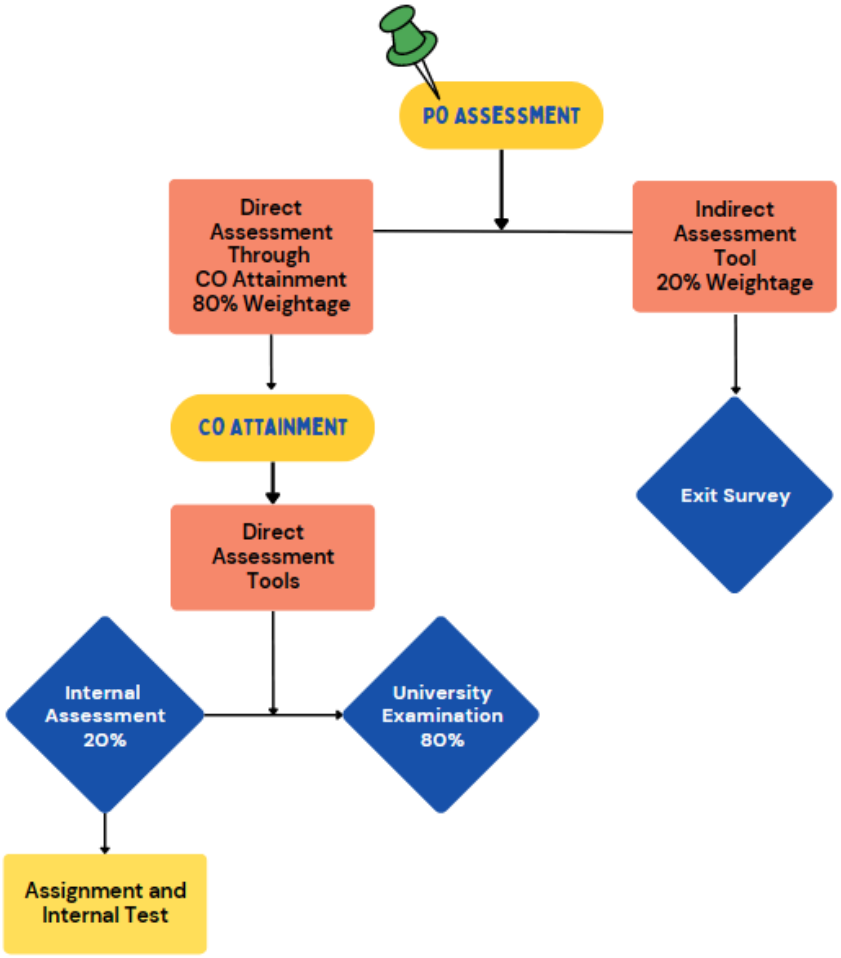
COPO Mapping: B.Sc. (H) Mathematics

Sem	PO / CO	PO1	PO2	PO3	PO4	PO5
I	**CO1**	x				
	CO2	x				
	CO3	x				
	CO4		x			

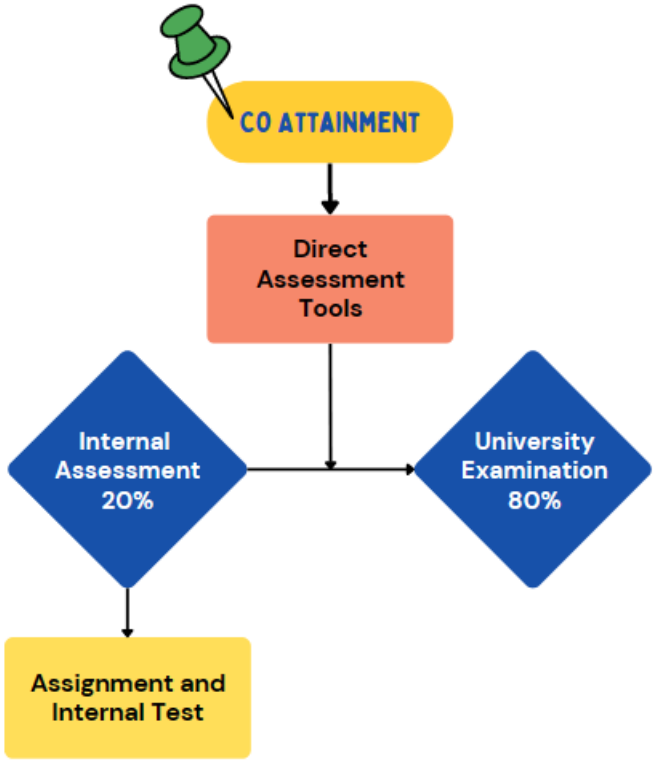
II	**CO1**	x				
	CO2		x			
	CO3		x			
	CO4		x			
III	**CO1**		x			
	CO2			x		
	CO3		x			
	CO4			x		
	CO5			x		
IV	**CO1**	x				
	CO2	x				
	CO3			x		
	CO4				x	
	CO5					x
V	**CO1**			x		
	CO2		x			
	CO3			x		
	CO4				x	
	CO5					x
VI	**CO1**		x			
	CO2			x		
	CO3			x		
	CO4					x

Attainment of COs and POs in B.Sc. (H) Mathematics

Assessment Tools:



CO Attainment Tools:



Internal Assessment Score:

- The internal assessment score is determined as per the following rubrics:

Range (% of attempts >= 60%)	Level of Attainment	
>=80 %	3	High
>70 to <80 %	2	Medium
60-70 %	1	Low

University Examination Score:

- The University examination score is determined as per the following rubrics:

Range (% of attempts >= 60%)	Level of Attainment	
>=80 %	3	High
>70 to <80 %	2	Medium
60-70 %	1	Low

Overall CO Attainment

- The overall CO attainment is calculated on a scale of 3 by considering 80 % of the level of attainment from University examination and 20% of the level of attainment from Internal assessment.

Program: B.Sc. (H) Mathematics
Course Name: Calculus
Course Code: 32351101
Semester I

Attainment (Direct Assessment)

Roll No.	Name	Internal Assessment Out of 25	University Exam. Out of Scale 10	University Exam. (Percentage = scale 10*9.5)
19026563001	GOPIKA.R	25	10	95
19026563002	MANU REMESH	21	10	95
19026563003	RAVEENA .P	24	9	85.5
19026563005	JAYADEV GOVIND	15	9	85.5
19026563006	YASHWARDHAN SINGH	21	7	66.5
19026563007	SAMEER DAS	23	10	95
19026563008	JEEVESH AWASTHI	25	10	95
19026563009	KONDU KARTHIK	25	9	85.5
19026563010	HARI PRANAV.N	25	9	85.5
19026563011	PANKAJ	25	10	95
19026563012	ABDULLA	23	9	85.5
19026563013	AKASH KUMAR BHARTI	23	10	95
19026563014	HARISH KUMAR	25	10	95
19026563015	DIKSHA	22	10	95
19026563016	KHUSHI CHUGH	25	8	76
19026563018	GAVTHAM T P	25	8	76
19026563019	NITIN KUMAR	21	8	76
19026563021	DEEPAK KUMAR	22	8	76

19026563023	HEMA RANI	24	10	95
19026563024	SANJAY MEENA	23	7	66.5
19026563025	RAM YADAV	22	10	95
19026563027	SAITEJA BAIRI	24	7	66.5
19026563028	RAJESH BHAKHAR	25	7	66.5
19026563029	VISHNU MEENA	25	9	85.5
19026563030	YOGESH KUMAR	23	9	85.5
19026563031	NEHA KASWAN	24	9	85.5
19026563032	DIPENDRA KUMAR KUMAWAT	25	9	85.5
19026563033	THEMALIPARAMBIL NAVEED ABBAS	20	6	57
19026563034	RUDRA PRATAP SHARMA	21	10	95
19026563035	YOGESH	25	7	66.5
19026563036	AJAY KUMAR GURJAR	22	9	85.5
19026563037	MOHIT PRAJAPAT	22	9	85.5
19026563038	DHANANJAY SONI	22	8	76
19026563039	YASHASVI	22	10	95
19026563040	TUSHAR YADAV	22	10	95
19026563041	SUDAMA BABU SINGHAL	21	10	95
19026563042	MUHAMMED JASSIM	24	10	95
19026563043	RAYYAN P P	25	7	66.5
19026563044	ROSHANI GOND	25	8	76
19026563045	SONU SUTHAR	24	8	76
19026563046	PARAS LOHAR	25	8	76
19026563047	RAKESH	25	7	66.5
19026563048	ABHISHEK KUMAR	22	7	66.5
19026563049	ABHIRAM SAMAYAMANTHULA	22	4	38

19026563050	MOHAMMAD ARSHAD JILANI	23	10	95
19026563052	ROHIT KUMAR	14	8	76
19026563054	UTKARSH CHAUDHARY	15	6	57
19026563055	DEVANSH SINGH	23	5	47.5
19026563056	ATUL RANA	23	9	85.5

Level of CO Attainment

Sem	Attempts	Internal Assessment	Level of Attainment	University Examination	Level of Attainment	***Overall CO Attainment**
I	No: of attempts >= 60%	48	3	45	3	**3**
	Total Attempts	49		49		
	% of attempts >= 60%	97.95		991.83		

*Overall Attainment = (20% of Internal Assessment Attainment + 80% of University Examination Attainment)

Course Level COPO Attainment Metrix

Sem I	PO1	PO2	PO3	PO4	PO5
CO1	3				
CO2	3				
CO3	3				
CO4		3			

% of attempts >= 60%	**Level of Attainment**	
>=80 %	3	High
>70 to <80 %	2	Medium
60-70 %	1	Low

Program: B.Sc. (H) Mathematics
Course Name: Real Analysis
Course Code: 32351201
Semester II

Attainment (Direct Assessment)

Roll No.	Name	Internal Assessment Out of 25	University Exam. Out of Scale 10	University Exam. (Percentage = scale 10*9.5)
19026563001	GOPIKA.R	22	9	85.5
19026563002	MANU REMESH	20	9	85.5
19026563003	RAVEENA .P	20	9	85.5
19026563005	JAYADEV GOVIND	17	8	76
19026563006	YASHWARDHAN SINGH	22	9	85.5
19026563007	SAMEER DAS	21	9	85.5
19026563008	JEEVESH AWASTHI	23	10	95
19026563009	KONDU KARTHIK	21	8	76
19026563010	HARI PRANAV.N	20	8	76
19026563011	PANKAJ	21	10	95
19026563012	ABDULLA	16	8	76
19026563013	AKASH KUMAR BHARTI	22	10	95
19026563014	HARISH KUMAR	24	9	85.5
19026563015	DIKSHA	22	9	85.5
19026563016	KHUSHI CHUGH	24	10	95
19026563018	GAVTHAM T P	0	8	76
19026563019	NITIN KUMAR	20	10	95
19026563021	DEEPAK KUMAR	21	9	85.5

19026563023	HEMA RANI	23	10	95
19026563024	SANJAY MEENA	20	9	85.5
19026563025	RAM YADAV	23	9	85.5
19026563027	SAITEJA BAIRI	20	8	76
19026563028	RAJESH BHAKHAR	21	8	76
19026563029	VISHNU MEENA	20	8	76
19026563030	YOGESH KUMAR	22	9	85.5
19026563031	NEHA KASWAN	20	9	85.5
19026563032	DIPENDRA KUMAR KUMAWAT	21	8	76
19026563033	THEMALIPARAMBIL NAVEED ABBAS	21	7	66.5
19026563034	RUDRA PRATAP SHARMA	19	9	85.5
19026563035	YOGESH	17	9	85.5
19026563036	AJAY KUMAR GURJAR	23	9	85.5
19026563037	MOHIT PRAJAPAT	21	9	85.5
19026563038	DHANANJAY SONI	21	9	85.5
19026563039	YASHASVI	20	9	85.5
19026563040	TUSHAR YADAV	21	9	85.5
19026563041	SUDAMA BABU SINGHAL	21	10	95
19026563042	MUHAMMED JASSIM	20	8	76
19026563043	RAYYAN P P	24	8	76
19026563044	ROSHANI GOND	17	7	66.5
19026563045	SONU SUTHAR	19	8	76
19026563046	PARAS LOHAR	18	8	76
19026563047	RAKESH	20	9	85.5
19026563048	ABHISHEK KUMAR	20	9	85.5
19026563049	ABHIRAM SAMAYAMANTHULA	20	8	76

19026563050	MOHAMMAD ARSHAD JILANI	22	10	95
19026563052	ROHIT KUMAR	21	10	95
19026563054	UTKARSH CHAUDHARY	12	5	47.5
19026563055	DEVANSH SINGH	17	6	57
19026563056	ATUL RANA	19	8	76

Level of CO Attainment

Sem	Attempts	Internal Assessment	Level of Attainment	University Examination	Level of Attainment	*Overall CO Attainment
II	No: of attempts >= 60%	47	3	47	3	**3**
	Total Attempts	49		49		
	% of attempts >= 60%	95.91		95.91		

*Overall Attainment = (20% of Internal Assessment Attainment + 80% of University Examination Attainment)

Course Level COPO Attainment Metrix

Sem II	PO1	PO2	PO3	PO4	PO5
CO1	3				
CO2		3			
CO3		3			
CO4		3			

% of attempts >= 60%	Level of Attainment	
>=80 %	3	High
>70 to <80 %	2	Medium
60-70 %	1	Low

Program: B.Sc. (H) Mathematics
Course Name: Theory of Real Functions
Course Code: 32351301
Semester III

Attainment (Direct Assessment)

Roll No.	Name	Internal Assessment Out of 25	University Exam. Out of Scale 10	University Exam. (Percentage = scale 10*9.5)
19026563001	GOPIKA.R	22	10	95
19026563002	MANU REMESH	23	9	85.5
19026563003	RAVEENA .P	22	10	95
19026563005	JAYADEV GOVIND	18	9	85.5
19026563006	YASHWARDHAN SINGH	19	10	95
19026563007	SAMEER DAS	20	9	85.5
19026563008	JEEVESH AWASTHI	25	10	95
19026563009	KONDU KARTHIK	24	10	95
19026563010	HARI PRANAV.N	21	10	95
19026563011	PANKAJ	22	10	95
19026563012	ABDULLA	24	10	95
19026563013	AKASH KUMAR BHARTI	21	10	95
19026563014	HARISH KUMAR	21	9	85.5
19026563015	DIKSHA	21	10	95
19026563016	KHUSHI CHUGH	25	10	95
19026563018	GAVTHAM T P	23	10	95
19026563019	NITIN KUMAR	21	10	95
19026563021	DEEPAK KUMAR	25	10	95

19026563023	HEMA RANI	0	10	95
19026563024	SANJAY MEENA	25	9	85.5
19026563025	RAM YADAV	21	10	95
19026563027	SAITEJA BAIRI	22	9	85.5
19026563028	RAJESH BHAKHAR	21	10	95
19026563029	VISHNU MEENA	21	8	76
19026563030	YOGESH KUMAR	19	9	85.5
19026563031	NEHA KASWAN	20	10	95
19026563032	DIPENDRA KUMAR KUMAWAT	23	9	85.5
19026563033	THEMALIPARAMBIL NAVEED ABBAS	18	10	95
19026563034	RUDRA PRATAP SHARMA	25	10	95
19026563035	YOGESH	24	9	85.5
19026563036	AJAY KUMAR GURJAR	17	10	95
19026563037	MOHIT PRAJAPAT	21	10	95
19026563038	DHANANJAY SONI	24	9	85.5
19026563039	YASHASVI	19	9	85.5
19026563040	TUSHAR YADAV	20	9	85.5
19026563041	SUDAMA BABU SINGHAL	23	10	95
19026563042	MUHAMMED JASSIM	24	10	95
19026563043	RAYYAN P P	23	10	95
19026563044	ROSHANI GOND	21	9	85.5
19026563045	SONU SUTHAR	20	10	95
19026563046	PARAS LOHAR	23	10	95
19026563047	RAKESH	21	8	76
19026563048	ABHISHEK KUMAR	25	10	95
19026563049	ABHIRAM SAMAYAMANTHULA	24	10	95

19026563050	MOHAMMAD ARSHAD JILANI	22	10	95
19026563052	ROHIT KUMAR	19	9	85.5
19026563054	UTKARSH CHAUDHARY	10	8	76
19026563055	DEVANSH SINGH	16	9	85.5
19026563056	ATUL RANA	22	10	95

Level of CO Attainment

Sem	Attempts	Internal Assessment	Level of Attainment	University Examination	Level of Attainment	*Overall CO Attainment
III	No: of attempts >= 60%	47	3	49	3	**3**
	Total Attempts	49		49		
	% of attempts >= 60%	95.91		100		

*Overall Attainment = (20% of Internal Assessment Attainment + 80% of University Examination Attainment)

Course Level COPO Attainment Metrix

Sem III	PO1	PO2	PO3	PO4	PO5
CO1		3			
CO2			3		
CO3		3			
CO4			3		
CO5			3		

% of attempts >= 60%	Level of Attainment	
>=80 %	3	High
>70 to <80 %	2	Medium
60-70 %	1	Low

Program: B.Sc. (H) Mathematics
Course Name: Partial Differential Equations
Course Code: 32351401
Semester IV

Attainment (Direct Assessment)

Roll No.	Name	Internal Assessment Out of 25	University Exam. Out of Scale 10	University Exam. (Percentage = scale 10*9.5)
19026563001	GOPIKA.R	15	9	85.5
19026563002	MANU REMESH	22	10	95
19026563003	RAVEENA .P	19	9	85.5
19026563005	JAYADEV GOVIND	12	8	76
19026563006	YASHWARDHAN SINGH	17	9	85.5
19026563007	SAMEER DAS	23	9	85.5
19026563008	JEEVESH AWASTHI	25	10	95
19026563009	KONDU KARTHIK	22	10	95
19026563010	HARI PRANAV.N	20	9	85.5
19026563011	PANKAJ	21	9	85.5
19026563012	ABDULLA	18	9	85.5
19026563013	AKASH KUMAR BHARTI	23	9	85.5
19026563014	HARISH KUMAR	25	10	95
19026563015	DIKSHA	23	10	95
19026563016	KHUSHI CHUGH	25	10	95
19026563018	GAVTHAM T P	19	9	85.5
19026563019	NITIN KUMAR	10	8	76

19026563021	DEEPAK KUMAR	23	9	85.5
19026563023	HEMA RANI	19	10	95
19026563024	SANJAY MEENA	25	10	95
19026563025	RAM YADAV	24	9	85.5
19026563027	SAITEJA BAIRI	15	8	76
19026563028	RAJESH BHAKHAR	16	9	85.5
19026563029	VISHNU MEENA	19	9	85.5
19026563030	YOGESH KUMAR	25	10	95
19026563031	NEHA KASWAN	20	9	85.5
19026563032	DIPENDRA KUMAR KUMAWAT	10	8	76
19026563033	THEMALIPARAMBIL NAVEED ABBAS	18	9	85.5
19026563034	RUDRA PRATAP SHARMA	25	10	95
19026563035	YOGESH	10	8	76
19026563036	AJAY KUMAR GURJAR	24	10	95
19026563037	MOHIT PRAJAPAT	22	10	95
19026563038	DHANANJAY SONI	21	10	95
19026563039	YASHASVI	24	10	95
19026563040	TUSHAR YADAV	20	9	85.5
19026563041	SUDAMA BABU SINGHAL	25	10	95
19026563042	MUHAMMED JASSIM	20	9	85.5
19026563043	RAYYAN P P	17	9	85.5
19026563044	ROSHANI GOND	24	9	85.5
19026563045	SONU SUTHAR	10	9	85.5
19026563046	PARAS LOHAR	22	10	95
19026563047	RAKESH	21	9	85.5
19026563048	ABHISHEK KUMAR	25	10	95

19026563049	ABHIRAM SAMAYAMANTHULA	13	8	76
19026563050	MOHAMMAD ARSHAD JILANI	25	10	95
19026563052	ROHIT KUMAR	15	9	85.5
19026563054	UTKARSH CHAUDHARY	10	6	57
19026563055	DEVANSH SINGH	10	7	66.5
19026563056	ATUL RANA	12	9	85.5

Level of CO Attainment

Sem	Attempts	Internal Assessment	Level of Attainment	University Examination	Level of Attainment	*Overall CO Attainment
IV	No: of attempts >= 60%	40	3	48	3	**3**
	Total Attempts	49		49		
	% of attempts >= 60%	81.63		97.95		

*Overall Attainment = (20% of Internal Assessment Attainment + 80% of University Examination Attainment)

Course Level COPO Attainment Metrix

Sem IV	PO1	PO2	PO3	PO4	PO5
CO1	3				
CO2	3				
CO3			3		
CO4				3	
CO5					3

% of attempts >= 60%	Level of Attainment	
>=80 %	3	High
>70 to <80 %	2	Medium
60-70 %	1	Low

Program: B.Sc. (H) Mathematics
Course Name: Metric Spaces
Course Code: 32351501
Semester V

Attainment (Direct Assessment)

Roll No.	Name	Internal Assessment Out of 25	University Exam. Out of Scale 10	University Exam. (Percentage = scale 10*9.5)
19026563001	GOPIKA.R	22	10	95
19026563002	MANU REMESH	25	9	85.5
19026563003	RAVEENA .P	25	9	85.5
19026563005	JAYADEV GOVIND	25	8	76
19026563006	YASHWARDHAN SINGH	22	10	95
19026563007	SAMEER DAS	24	10	95
19026563008	JEEVESH AWASTHI	24	10	95
19026563009	KONDU KARTHIK	20	10	95
19026563010	HARI PRANAV.N	24	10	95
19026563011	PANKAJ	25	9	85.5
19026563012	ABDULLA	24	10	95
19026563013	AKASH KUMAR BHARTI	16	8	76
19026563014	HARISH KUMAR	23	10	95
19026563015	DIKSHA	23	10	95
19026563016	KHUSHI CHUGH	23	10	95
19026563018	GAVTHAM T P	23	10	95
19026563019	NITIN KUMAR	17	8	76

19026563021	DEEPAK KUMAR	25	9	85.5
19026563023	HEMA RANI	22	10	95
19026563024	SANJAY MEENA	22	10	95
19026563025	RAM YADAV	24	10	95
19026563027	SAITEJA BAIRI	20	9	85.5
19026563028	RAJESH BHAKHAR	20	10	95
19026563029	VISHNU MEENA	21	10	95
19026563030	YOGESH KUMAR	18	9	85.5
19026563031	NEHA KASWAN	11	9	85.5
19026563032	DIPENDRA KUMAR KUMAWAT	18	9	85.5
19026563033	THEMALIPARAMBIL NAVEED ABBAS	22	9	85.5
19026563034	RUDRA PRATAP SHARMA	19	10	95
19026563035	YOGESH	13	8	76
19026563036	AJAY KUMAR GURJAR	20	10	95
19026563037	MOHIT PRAJAPAT	11	10	95
19026563038	DHANANJAY SONI	16	10	95
19026563039	YASHASVI	17	10	95
19026563040	TUSHAR YADAV	23	10	95
19026563041	SUDAMA BABU SINGHAL	24	10	95
19026563042	MUHAMMED JASSIM	18	10	95
19026563043	RAYYAN P P	21	8	76
19026563044	ROSHANI GOND	15	9	85.5
19026563045	SONU SUTHAR	22	9	85.5
19026563046	PARAS LOHAR	25	10	95
19026563047	RAKESH	24	10	95
19026563048	ABHISHEK KUMAR	23	10	95

19026563049	ABHIRAM SAMAYAMANTHULA	25	10	95
19026563050	MOHAMMAD ARSHAD JILANI	22	10	95
19026563052	ROHIT KUMAR	22	9	85.5
19026563054	UTKARSH CHAUDHARY	21	8	76
19026563055	DEVANSH SINGH	24	8	76
19026563056	ATUL RANA	17	8	76

Level of CO Attainment

Sem	Attempts	Internal Assessment	Level of Attainment	University Examination	Level of Attainment	*Overall CO Attainment
V	No: of attempts >= 60%	46	3	54	3	**3**
	Total Attempts	49		54		
	% of attempts >= 60%	93.87		100		

*Overall Attainment = (20% of Internal Assessment Attainment + 80% of University Examination Attainment)

Course Level COPO Attainment Metrix

Sem V	PO1	PO2	PO3	PO4	PO5
CO1			3		
CO2		3			
CO3			3		
CO4				3	
CO5					3

% of attempts >= 60%	Level of Attainment	
>=80 %	3	High
>70 to <80 %	2	Medium
60-70 %	1	Low

Program: B.Sc. (H) Mathematics
Course Name: Complex Analysis
Course Code: 12031601
Semester VI

Attainment (Direct Assessment)

Roll No.	Name	Internal Assessment Out of 25	University Exam. Out of Scale 10	University Exam. (Percentage = scale 10*9.5)
19026563001	GOPIKA.R	22	9	85.5
19026563002	MANU REMESH	21	7	66.5
19026563003	RAVEENA .P	23	8	76
19026563005	JAYADEV GOVIND	22	7	66.5
19026563006	YASHWARDHAN SINGH	22	8	76
19026563007	SAMEER DAS	21	8	76
19026563008	JEEVESH AWASTHI	24	10	95
19026563009	KONDU KARTHIK	20	7	66.5
19026563010	HARI PRANAV.N	24	6	57
19026563011	PANKAJ	21	8	76
19026563012	ABDULLA	24	7	66.5
19026563013	AKASH KUMAR BHARTI	16	8	76
19026563014	HARISH KUMAR	23	8	76
19026563015	DIKSHA	23	9	85.5
19026563016	KHUSHI CHUGH	23	10	95
19026563018	GAVTHAM T P	19	6	57
19026563019	NITIN KUMAR	17	8	76
19026563021	DEEPAK KUMAR	23	8	76

19026563023	HEMA RANI	22	9	85.5
19026563024	SANJAY MEENA	22	9	85.5
19026563025	RAM YADAV	24	8	76
19026563027	SAITEJA BAIRI	20	6	57
19026563028	RAJESH BHAKHAR	20	8	76
19026563029	VISHNU MEENA	21	9	85.5
19026563030	YOGESH KUMAR	18	9	85.5
19026563031	NEHA KASWAN	11	8	76
19026563032	DIPENDRA KUMAR KUMAWAT	18	8	76
19026563033	THEMALIPARAMBIL NAVEED ABBAS	22	8	76
19026563034	RUDRA PRATAP SHARMA	24	10	95
19026563035	YOGESH	13	8	76
19026563036	AJAY KUMAR GURJAR	20	9	85.5
19026563037	MOHIT PRAJAPAT	11	9	85.5
19026563038	DHANANJAY SONI	23	10	95
19026563039	YASHASVI	22	10	95
19026563040	TUSHAR YADAV	23	9	85.5
19026563041	SUDAMA BABU SINGHAL	24	10	95
19026563042	MUHAMMED JASSIM	18	9	85.5
19026563043	RAYYAN P P	21	7	66.5
19026563044	ROSHANI GOND	15	8	76
19026563045	SONU SUTHAR	22	8	76
19026563046	PARAS LOHAR	25	7	66.5
19026563047	RAKESH	24	8	76
19026563048	ABHISHEK KUMAR	23	10	95
19026563049	ABHIRAM SAMAYAMANTHULA	25	7	66.5

19026563050	MOHAMMAD ARSHAD JILANI	22	10	95
19026563052	ROHIT KUMAR	22	9	85.5
19026563054	UTKARSH CHAUDHARY	17	5	47.5
19026563055	DEVANSH SINGH	18	5	47.5
19026563056	ATUL RANA	16	8	76

Level of CO Attainment

Sem	Attempts	Internal Assessment	Level of Attainment	University Examination	Level of Attainment	*Overall CO Attainment
VI	No: of attempts >= 60%	46	3	44	3	**3**
	Total Attempts	49		49		
	% of attempts >= 60%	93.87		89.79		

*Overall Attainment = (20% of Internal Assessment Attainment + 80% of University Examination Attainment)

Course Level COPO Attainment Metrix

Sem VI	PO1	PO2	PO3	PO4	PO5
CO1		3			
CO2			3		
CO3			3		
CO4					3

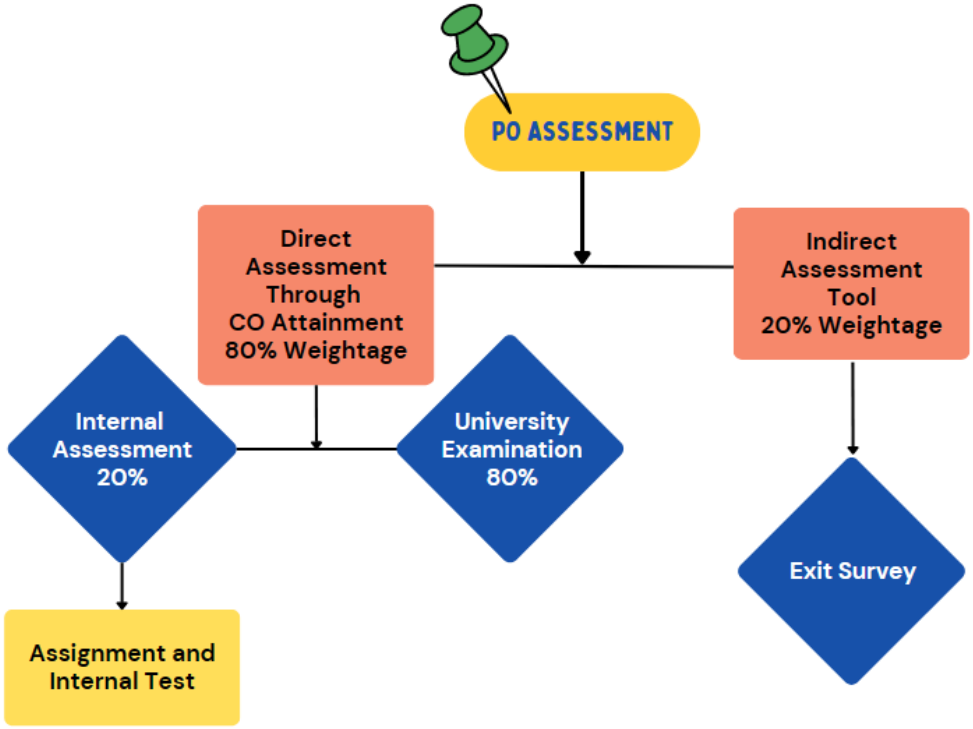
% of attempts >= 60%	Level of Attainment	
>=80 %	3	High
>70 to <80 %	2	Medium
60-70 %	1	Low

Program level CO-PO matrix of one course from each semester:

Sem	Code	POs / Course	PO1	PO2	PO3	PO4	PO5
I	32351101	Calculus	3	3			
II	32351201	Real Analysis	3	3			
III	32351301	Theory Of Real Functions		3	3		
IV	32351401	Partial Differential Equations	3		3	3	3
V	32351501	Metric Spaces		3	3	3	3
VI	32351601	Complex Analysis		3	3		3
Overall			**3**	**3**	**3**	**3**	**3**

% of attempts >= 60%	Level of Attainment	
>=80 %	**3**	**High**
>70 to <80 %	2	Medium
60-70 %	1	Low

PO Assessment Tools:



	Assessment Methods	Weightage 1	Weightage 2	Remarks
DIRECT ASSESSMENT	University Examination	80%	80%	Assessment through Cos attainment
	Assignments	20%		
	Internal Examination			
INDIRECT ASSESSMENT	Exit Survey	100%	20%	Direct evaluation to POs

Indirect PO Assessment (Through Exit Survey)

S. No.	Question	Score					POs	No: of Attempts >=60% of Excellent Score	Total No. of Attempts
		Excellent (5)	Very Good (4)	Good (3)	Fair (2)	Poor (1)			
1	Syllabus is need based and suitable to the course.	9	24	14	2	-	PO1	47	49
2	The curriculum provides options for continuous assessment through quiz and exams	7	24	14	4	-	PO3	45	49
3	Curriculum developed and implementation have relevance to the local and national care needs	7	18	21	3	-	PO4	46	49
4	The curriculum facilitates adequate self-learning.	8	21	18	2	-	PO1	47	49
5	The curriculum provides the ability to express thoughts and ideas effectively in writing and orally.	9	23	15	2	-	PO2	47	49
6	The curriculum provides experiential learning through student seminar, group discussion, projects, field visits.	7	16	22	4	-	PO5	45	49

Indirect PO Assessment (Attainment Through Survey)

	PO1	PO2	PO3	PO4	PO5
No: of Attempts >=60% of Excellent Score	94	47	45	46	45
Total No. of Attempts	98	49	49	49	49
% of attempts >= 60%	95.91	95.91	91.83	93.87	91.83
Attainment	**3**	**3**	**3**	**3**	**3**

PO Attainment Level:

	PO1	PO2	PO3	PO4
*PO Attainment	**3**	**3**	**3**	**3**
Direct Attainment	**3**	**3**	**3**	**3**
Indirect Attainment	**3**	**3**	**3**	**3**

*PO Attainment = (80% of Direct Attainment + 20% of Indirect Attainment)

% of attempts >= 60%	Level of Attainment	
>=80 %	**3**	**High**
>70 to <80 %	2	Medium
60-70 %	1	Low