



## SHIVAJI UNIVERSITY KOLHAPUR

### Circular No. ( 259 ) Exam of March/April.-2024 to be held in March/April-2024.

Final Programme of the M.A./M.Sc. Mathematics Part-I (Sem.- I & Sem-II ) NEP-0.2 Course Code-2375 & M.A./M.Sc. Mathematics Part-I & II (Sem -I to Sem.- IV) NEP-0.1 Corse code- 2353 & Corse code- 2341

M.Sc. Mathematics with Computer Application Part-I (Sem.- I & Sem-II ) NEP-0.2 Course Code-2374 & M.Sc. Tech. (Industrial Mathematics with Computer Application ) Part-I & II (Sem.-I to Sem.- IV ) NEP-0.1 Course Code- 2355 & M.Sc. Tech. Part-II & III (Sem.- III to V) course code 252 Examination March/April.-2024 to be held in March/April/May-2024.

**INSTRUCTIONS-** 1. SU/Appointment/RVC/55 Dated 20/01/2024.

2.Common instruction as per Circular No. SU/ON EXAM /29 Dated 01/02/2020, also available in University website [www.unishivaji.ac.in](http://www.unishivaji.ac.in)

The Written Examination will be held at following center and Places declared:-

Sr. No	Exam	College Code	Places
1	M.Sc. Mathematics M.Sc. (Mathematics with Computer Application M.Sc. (Industrial Mathematics with Computer Application ) M.Sc. Tech	264	Department of Mathematics, Shivaji University Kolhapur
2	M.A./M.Sc. Mathematics		Department of Distance Education, Kolhapur
3	M.Sc. Physics, M.A./M.Sc. Mathematics	01	Vivekanand College, Kolhapur
4	M.A./M.Sc. Mathematics	50	Yashwantrao Chavan Warna Mahavidyalaya, WARNANAGAR
5	M. Sc Physics M.A./M.Sc. Mathematics	30	The New College Kolhapur
6	M.A./M.Sc. Mathematics M.A./M. Sc. Geography M.Sc. Information Technology	90	Karmveer Bhaurao Patil College, URUN –ISLAMPUR.
7	M.Sc. Physics, M.A./M.Sc. Mathematics	80	Willingdon College, SANGLI
8	M.A./M. Sc. Geography, Industrial Microbiology, M. Sc.. Statistics, M.A./M. Sc.. Mathematics,	156	Sadguru Gadage Maharaj College, KARAD
9	M.sc Physics, Statistics, M.A./M.Sc.. Mathematics	149	Yashwantrao Chavan Institute of Science, SATARA.

**M.A./M.Sc. Mathematics [ NEP-0.2]**

**( Course Code -2375)**

<b>Branch Code- M.A/M.Sc. Mathematics [ NEP-0.2]</b>			<b>From Oct—2023]</b>	
		Part I :- Sem.-I		
<b>PAPER NO.</b>	<b>PAPER CODE</b>	<b>PAPER NAME</b>	<b>DAY &amp; DATE</b>	<b>Evening</b>
<b>Major Mandatory</b>				
I	92492	Linear Algebra	Friday 19/04/2024	02:30 P.M. To 05:30 P.M.
II	92493	Real Analysis	Monday 22/04/2024	10:30 A.M. To 01:30 P.M.
III	92494	Ordinary Differential Equations	Wednesday 24/04/2024	02:30 P.M. To 05:30 P.M.
IV	92495	Numerical Analysis-I	Friday 26/04/2024	02:30 P.M. To 04:30 P.M.
<b>Research Methodology</b>				
V	93744	Research Methodology	Monday 29/04/2024	
<b>Major Elective Any One Of The Following Paper</b>				
VI	92383	Differential Geometry	Thursday 02/05/2024	02:30 P.M. To 05:30 P.M.
	92384	Integral Transforms		
	92385	Theory of Computation		
	92386	Graph Theory-I		
	92387	Lattice Theory-I		
	92388	Dynamical Systems- I		
	92496	Combinatorics		
	92389	Basics of Python		
	92390	Web Technology		
92497	Linear Programming and Its Application			

**M.A./M.Sc. Mathematics [ NEP-0.1]**

**( Course Code -2353)**

<b>Branch Code- M.A/M.Sc. Mathematics [ NEP-0.1]</b>			<b>From Oct—2022</b>	
		Part I :- Sem.-I		
<b>PAPER NO.</b>	<b>PAPER CODE</b>	<b>PAPER NAME</b>	<b>DAY &amp; DATE</b>	<b>Evening</b>
I	87751	Advanced Calculus	Saturday 27/04/2024	02:30 P.M. To 05:30 P.M..
II	87752	Linear Algebra	Friday 19/04/2024	
III	87753	Complex Analysis	Saturday 4/05/2024	
IV	87754	Classical Mechanics	Tuesday 7/05/2024	
V	87755	Ordinary Differential Equations	Wednesday 24/04/2024	
<b>Choose Any One Of The Following Paper</b>				
VI	87756	Number Theory	Tuesday 23/04/2024	
	87853	Mathematical Methods		

**M.A/M.Sc. Mathematics [ NEP-0.2]**

**( Course Code -2375)**

<b>Branch Code - M.A/M.Sc. Mathematics [ NEP-0.2]</b>				<b>From March-2024</b>	
<b>Part I - Sem II</b>					
<b>PAPER NO.</b>	<b>PAPER CODE</b>	<b>PAPER NAME</b>	<b>DAY &amp; DATE</b>	<b>Morning</b>	
VII	92524	Advanced Calculus	Saturday 27/04/2024	10:30 A.M. To 01:30 P.M.	
VIII	92522	Algebra	Thursday 25/04/2024		
XIX	92523	Topology	Tuesday 30/04/2024		
X	92525	Numerical Analysis	Saturday 20/04/2024	10:30 A.M. To 12:30 P.M.	
<b>Major Elective Any One Of The Following Paper</b>					
XII	92527	Quantitative Techniques in Operation Research	Tuesday 23/04/2024	10:30 A.M. To 01:30 P.M.	
	92526	Number Theory			
	94547	Advanced Algebra			
	94549	Algebraic Automata Theory			
	94548	Difference Equations			
	94551	Lattice Theory-II			
	94554	PHP With MySQL			
	94553	Data Science with Python			
	94550	Graph Theory-II			
	94552	Dynamical Systems – II			

**M.A/M.Sc. Mathematics [ NEP-0.1]**

**( Course Code -2353)**

<b>Branch Code - M.A/M.Sc. Mathematics [ NEP-0.1]</b>				<b>From March-2023</b>	
<b>Part I - Sem II</b>					
<b>PAPER NO.</b>	<b>PAPER CODE</b>	<b>PAPER NAME</b>	<b>DAY &amp; DATE</b>	<b>Morning/ Evening</b>	
VII	87757	Real Analysis	Monday 22/04/2024	10:30 A.M. To 01:30 P.M.	
VIII	87758	Algebra	Thursday 25/04/2024	10:30 A.M. To 01:30 P.M.	
XIX	87759	Topology	Tuesday 30/04/2024		
X	87760	Numerical Analysis	Saturday 20/04/2024		
XI	87761	Partial Differential Equations	Monday 06/05/2024		
<b>Choose Any One Of The Following Paper</b>					
XII	87762	Operations Research	Friday 03/05/2024		
	90173	Integral Transforms			

Branch Code - M.A/M.Sc. Mathematics (NEP-0.1)			From March-2022		
Part II - Sem III					
PAPER NO.	PAPER CODE	PAPER NAME	DAY & DATE	Morning/ Evening	
XI	90885	Functional Analysis	Friday 26/04/2024	10:30 A.M. To 01:30 P.M.	
<b>Any one of the following</b>					
XII	90886	Advanced Discrete Mathematics	Thursday 18/04/2024	2:30 P.M.  To  05:30 P.M.	
	92093	Topological Vector Spaces			
<b>XIII, XIV &amp; XV Any Three of the following Papers</b>					
	92096	Lattice Theory – I	Monday 29/04/2024		
	92104	Algebraic Topology	Saturday 13/04/2024		
	92102	Space Dynamics- I	Monday 15/04/2024		
	92106	Coding Theory	Wednesday 10/04/2024		
	90887	Non-linear Optimization Techniques			
	92098	Dynamical Systems – I	Tuesday 16/04/2024		
	92101	Commutative Algebra - I			
	90889	Fluid Dynamics	Friday 12/04/2024		
	92105	Probability and Stochastic Processes			
	92095	General Relativity – I	Thursday 2/05/2024		
	90890	Combinatorics			
	92094	Fractional Calculus	Monday 08/04/2024		
	90888	Fuzzy Mathematics –I	Tuesday 26/03/2024		
	92097	Approximation Theory	Thursday 04/04/2024		
	92103	Theory of Computation	Friday 5/04/2024		
	92100	Differential Geometry	Wednesday 03/04/2024		
	92099	Graph Theory-I	Tuesday 02/04/2024		

Branch Code - M.A/M.Sc. Mathematics ( C.B.C.S.)		From March-2022			
		<b>Part II - Sem III</b>			
PAPER NO.	PAPER CODE	PAPER NAME	DAY & DATE	Evening	
XI	85386	Real Analysis	Monday 22/04/2024	10:30 A.M. To 01:30 P.M.	
<b>Any one of the following</b>					
XII	85387	Advanced Discrete Mathematics	Thursday 18/04/2024	2:30 P.M.  To 05:30 P.M.	
	85388	Topological Vector Spaces			
<b>XIII, XIV &amp; XV Any Three of the following Papers</b>					
	85395	Lattice Theory – I	Monday 29/04/2024		
	85404	Algebraic Topology	Saturday 13/04/2024		
	85402	Space Dynamics- I	Monday 15/04/2024		
	85389	Number Theory	Tuesday 23/04/2024		
	85403	Theory of Computation	Friday 05/04/2024		
	85397	Dynamical Systems – I	Tuesday 16/04/2024		
	85401	Commutative Algebra - I			
	85392	Fluid Dynamics	Friday 12/04/2024		
	85405	Probability and Stochastic Processes			
	85394	General Relativity – I	Thursday 2/05/2024		
	85400	Combinatorics			
	85393	Fractional Calculus	Monday 08/04/2024		
	85391	Fuzzy Mathematics –I	Tuesday 26/03/2024		
	85396	Approximation Theory	Thursday 04/04/2024		
	85390	Operations Research – I	Friday 03/05/2024		
	85399	Differential Geometry	Wednesday 03/04/2024		
	85398	Graph Theory-I	Tuesday 02/04/2024		

Branch Code- M.A/M.Sc. Mathematics [NEP-0.1]		From March—2024			
		Part II :- Sem.-IV			
PAPER NO.	PAPER CODE	PAPER NAME	DAY & DATE	Morning	
	90891	Field Theory	Friday 05/04/2024	10:30 A.M. To 01:30 P.M.	
	90892	Integral Equations	Wednesday 03/04/2024		
	92127	Measure and Integration	Wednesday 03/04/2024		
<b>Paper No. – XVIII, XIX &amp; XX – Choose any Three of the following</b>					
	92345	Algebraic Automata Theory	Monday 08/04/2024		
	92347	Automatic Languages and computation			
	90896	Algebraic Number Theory	Thursday 28/03/2024		
	90894	Fuzzy Mathematics-II	Saturday 13/04/2024		
	92342	Theory of Distributions			
	90895	Computational Fluid Dynamics	Monday 01/04/2024		
	92600	Analysis on Manifolds			
	92128	Fractional Differential Equations	Saturday 30/03/2024		
	92599	Graph Theory-II			
	92597	Wavelet Analysis	Wednesday 27/03/2024		
	92598	Dynamical Systems- II			
	92343	Commutative Algebra-II	Wednesday 10/04/2024		
	92344	Space Dynamics-II			
	92346	Dynamics Equation on Time Scales	Tuesday 16/04/2024		
	92130	Lattice Theory-II			
	92129	General Relativity-II	Thursday 18/04/2024		
	90893	Quantitative Techniques In Operations Research	Monday 15/04/2024		

Branch Code- M.A/M.Sc. Mathematics ( C.B.C.S.)		From March—2023			
		Part II :- Sem.-IV			
PAPER NO.	PAPER CODE	PAPER NAME	DAY & DATE	Morning	
	86711	Integral Equations	Wednesday 03/04/2024	10:30 A.M. To 01:30 P.M.	
	86712	Field Theory	Friday 05/04/2024		
<b>Paper No. – XVIII, XIX &amp; XX – Choose any Three of the following</b>					
	86714	Algebraic Number Theory	Thursday 28/03/2024		
	90542	Automatic Languages and computation	Monday 08/04/2024		
	86715	Operations Research –II	Thursday		
	90541	Automata Theory	04/04/2024		
	86716	Fuzzy Mathematics-II	Saturday		
	90540	Theory of Distributions	13/04/2024		
	86717	Computational Fluid Dynamics	Monday		
	90539	Analysis on Manifolds	1/04/2024		
	86718	Fractional Differential Equations	Saturday		
	90538	Graph Theory-II	30/03/2024		
	86719	Wavelet Analysis	Wednesday		
	90537	Dynamical Systems- II	27/03/2024		
	86720	Commutative Algebra-II	Wednesday		
	86721	Space Dynamics-II	10/04/2024		
	86722	Dynamics Equation on Time Scales	Tuesday		
	90536	Lattice Theory-II	16/04/2024		
	90535	General Relativity-II	Thursday 18/04/2024		

**M.Sc. (Mathematics with Computer Application ) [ NEP-0.2] ( Course Code- 2374)**

<b>Branch Code- M.Sc. (Mathematics with Computer Application )</b>				<b>From Oct—2023</b>
Part I :- Sem.-I				
<b>PAPER NO.</b>	<b>PAPER CODE</b>	<b>PAPER NAME</b>	<b>DAY &amp; DATE</b>	<b>Evening</b>
<b>Major Mandatory</b>				
I	91787	Linear Algebra	Monday 06/05/2024	10:30 A.M. To 01:30 P.M.
II	91788	Object Oriented Programming	Thursday 25/04/2024	2:30 P.M. To 05:30 P.M.
III	91789	Database Management System	Saturday 27/04/2024	
IV	91790	Numerical Analysis-I	Tuesday 30/04/2024	2:30 P.M. To 04:30 P.M.
<b>Research Methodology</b>				
V	91801	Research Methodology	Saturday 04/05/2024	
<b>Major Elective Any One Of The Following Paper</b>				
VI	91791	Combinatorics	Tuesday 23/04/2024	10:30 A.M. To 01:30 P.M.
	91792	Differential Geometry		
	91793	Integral Transforms		
	91794	Theory of Computation		
	91795	Graph Theory-I		
	91796	Lattice Theory-I		
	91798	Dynamical Systems- I		
	91797	Linear Programming and Its Application		
	91799	Basics of Python		
	91800	Web Technology		

**M.Sc. Tech. (Industrial Mathematics with Computer Application ) [ NEP-0.1] ( Course Code- 2355)**

<b>Branch Code- M.Sc. Tech. (Industrial Mathematics with Computer Application )</b>				<b>From Oct--2022</b>
Part I :- Sem.-I				
<b>PAPER NO.</b>	<b>PAPER CODE</b>	<b>PAPER NAME</b>	<b>DAY &amp; DATE</b>	<b>Morning/ Evening</b>
V	88608	Advanced Calculus	Friday 26/04/2024	10:30 A.M. To 01:30 P.M.
III	88609	Linear Algebra	Tuesday 23/04/2024	2:30 P.M. To 05:30 P.M.
I	88610	Discrete Mathematical Structures-I	Friday 19/04/2024	
IV	88611	Computer Architecture	Thursday 02/05/2024	
II	88612	Object Oriented Programming	Thursday 25/04/2024	



**M.Sc. (Mathematics with Computer Application ) [ NEP-0.2] ( Course Code- 2374)**

<b>Branch Code- M.Sc. (Mathematics with Computer Application )</b>				<b>From March—2024</b>
<b>Part I :- Sem.-II</b>				
<b>PAPER NO.</b>	<b>PAPER CODE</b>	<b>PAPER NAME</b>	<b>DAY &amp; DATE</b>	<b>Morning</b>
<b>Major Mandatory</b>				
I	94755	Algebra	Monday 29/04/2024	10:30 A.M. To 01:30 P.M.
II	94757	Java Programming	Wednesday 24/04/2024	
III	94756	Advanced Calculus	Friday 26/04/2024	
<b>Major Elective Any One Of The Following Paper</b>				
	94765	Quantitative Techniques in Operation Research	Thursday 02/05/2024	10:30 A.M. To 01:30 P.M.
	94759	Number Theory		
	94760	Advanced Algebra		
	94762	Algebraic Automata Theory		
	94761	Difference Equations		
	94764	Lattice Theory-II		
	94768	PHP With MySQL		
	94763	Graph Theory-II		
	94766	Dynamical Systems- II		
	94767	Data Science with Python		

**M.Sc. Tech. (Industrial Mathematics with Computer Application ) [ NEP-0.1] ( Course Code- 2355)**

<b>Branch -M.Sc. Tech. (Industrial Mathematics with Computer Application )</b>				<b>Revised From March-2023)</b>
<b>Part I :- Sem.-II</b>				
<b>PAPER NO.</b>	<b>PAPER CODE</b>	<b>PAPER NAME</b>	<b>DAY &amp; DATE</b>	<b>Morning</b>
VI	88614	Numerical Analysis	Tuesday 30/04/2024	10:30 A.M. To 01:30 P.M.
VII	88615	Algebra	Monday 29/04/2024	
VIII	88616	Discrete Mathematical Structures-II	Saturday 20/04/2024	
IX	88617	Data Structures	Monday 22/04/2024	
X	88618	Database Management System	Saturday 27/04/2024	

**M.Sc. Tech. (Industrial Mathematics with Computer Application ) [NEP-0.1]**  
**( Course Code- 2355)**

<b>Branch Code -M.Sc. Tech. (Industrial Mathematics with Computer Application</b> <b>( From Oct-2023)</b>				
Part II :- Sem.-III				
<b>PAPER NO.</b>	<b>PAPER CODE</b>	<b>PAPER NAME</b>	<b>DAY &amp; DATE</b>	<b>Evening</b>
XI	91502	Complex Analysis	Wednesday 24/04/2024	2:30 P.M. To 05:30 P.M.
XII	91503	Ordinary Differential Equations	Friday 03/05/2024	
XIII	91504	Design and Analysis of Algorithms-I	Monday 06/05/2024	
V	91505	Operating System	Saturday 04/05/2024	
III	91506	Python Programming	Monday 22/04/2024	

**M.Sc. TECH ( MATHEMATICS ) ( C.B.C.S.)** **( Course Code- 252)**

<b>Branch Code - M.Sc. TECH ( MATHEMATICS ) ( C.B.C.S.)</b> <b>( From Oct-2019)</b>				
Part II :- Sem.-III				
<b>PAPER NO.</b>	<b>PAPER CODE</b>	<b>PAPER NAME</b>	<b>DAY &amp; DATE</b>	<b>Morning/ Evening</b>
XI	74024	Complex Analysis	Wednesday 24/04/2024	2:30 P.M. To 05:30 P.M.
XII	74025	ODE	Friday 03/05/2024	
XIII	74026	DAA-I	Monday 06/05/2024	
V	74027	Database System	Saturday 27/04/2024	10:30 A.M. To 01:30 P.M.
III	74028	Object Oriented Programming with C++	Tuesday 30/04/2024	2:30 P.M. To 05:30 P.M.

**M.Sc. Tech. (Industrial Mathematics with Computer Application ) [NEP-0.1]**  
**( Course Code- 2355)**

<b>From March-2024</b>				
Part II :- Sem.-IV				
<b>PAPER NO.</b>	<b>PAPER CODE</b>	<b>PAPER NAME</b>	<b>DAY &amp; DATE</b>	<b>Morning</b>
I	91509	Real Analysis	Friday 19/04/2024	10:30 A.M. To 01:30 P.M.
II	91510	Operation Research	Monday 22/04/2024	
IV	91511	Software Engineering	Thursday 25/04/2024	
V	91512	PHP With My SQL	Thursday 2/05/2024	
VI	91513	Java Programming	Saturday 04/05/2024	

Branch Code - M.Sc. TECH ( MATHEMATICS ) ( C.B.C.S.)				From Oct-2020
Part II :- Sem.-IV				
PAPER NO.	PAPER CODE	PAPER NAME	DAY & DATE	Morning/ Evening
I	79483	Real Analysis	Friday 19/04/2024	10:30 A.M. To 01:30 P.M.
II	79884	Operation Research	Monday 22/04/2024	
IV	79485	DAA-II	Tuesday 23/04/2024	2.30 P.M. To 05.30 P.M.
V	79486	PHP With My SQL	Thursday 2/05/2024	10:30 A.M. To 01:30 P.M.
VI	79487	Java Programming	Saturday 04/05/2024	

Branch Code - M.Sc. TECH ( MATHEMATICS ) ( C.B.C.S.)				From Oct-2020
Part III :- Sem.-V				
PAPER NO.	PAPER CODE	PAPER NAME	DAY & DATE	Morning
I	81119	Advanced Web Technology	Friday 26/04/2024	10:30 A.M. To 01:30 P.M.
II	81120	Software Engineering	Thursday 25/04/2024	
III	81121	Computer Networks	Monday 29/04/2024	
IV	81122	Cyber Security	Saturday 20/04/2024	
<b>Paper No. V- Choose any One of the following</b>				
	81123	Compiler Techniques	Tuesday 07/05/2024	
	81124	Linux Operating System		
	81125	Android Programming		
	81126	Machine Learning		

**Note:-** In case of any Query found in respective Question Paper, student shall communicate the same through Principal / Senior Supervisor within 03 days from the date of concerned Question paper to, Deputy Registrar, Appointment Section, Room No. 205 Exam Building No. 1 Shivaji Univeristy, Kolhapur- 416004.

Vidyanagar,  
Kolhapur – 416 004  
Date :- 11 March 2024

Sd/-  
Dr. Ajitsinh. N. Jadhav  
DIRECTOR  
BOARD OF EXAMINATIONS AND EVALUATION