

Periods: 30	Total Marks: 50
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Syllabus

Unit I: Divisibility Theory in the Integers:

Lectures-08

Mathematical induction, The division algorithm, The greatest common divisor, The Euclidean algorithm.

Unit II: Prime Numbers and properties:

Lectures-07

The Diophantine equation, The fundamental theorem of arithmetic
The sieve of Eratosthenes.

Unit III: The Theory of Congruence's:

Lectures-08

The Goldbach conjecture, Basic properties of congruence, Binary and decimal Representations of integers.

Unit IV: Fermat's Theorem:

Lectures-07

Linear congruence's and the Chinese remainder theorem, Fermat's little theorem and Pseudo primes, Wilson's theorem.

Text Book:

David M. Burton, "Elementary Number Theory", McGraw Hill Education (India), Private limited, 7th edition

Scope:

Unit I:

Chapter 1: art 1.1

Chapter 2: art 2.2, 2.3, 2.4

Unit-II:

Chapter 2: art 2.5

Chapter 3: art 3.1, 3.2

Unit-III:

Chapter 3: art 3.3

Chapter 4: art 4.2, 4.3

Unit-IV:

Chapter 4: art 4.4

Chapter 5: art 5.2, 5.3

REFERENCES:

1. A. Baker, "A concise Introduction to the Theory of Numbers", Cambridge University press, 1984:
2. J. P. Serre, "A course in Arithmetic-GTM Vol 7", Springer Verlag, 1973:
3. Tom M Apostol, "Introduction to Analytic Number Theory", Norosa Publishing House, 1980:
4. I Niven and Zuckerman, "An Introduction to the Theory of Numbers", Wiley, New

Elementary Number Theory
Students Enrollment List
Academic Year 2022-23

Sr. No.	Name of the Students	Class
1	Ahirrao Prathmesh Yogesh	B.Sc. TY
2	Patil Gayatri Balawant	B.Sc. TY
3	Potdar Bhagyshri Madhukar	B.Sc. TY
4	Dhumale Pratiksha Pramod	B.Sc. TY
5	Badde Shraddha Balbhim	B.Sc. SY
6	Shindalkar Mahadevi Pandit	B.Sc. SY
7	Patil Sushma Shivraj	B.Sc. SY
8	Rodge Yogesh Sanjay	B.Sc. SY
9	Survase Shubham Harishchandra	B.Sc. SY
10	Bawale Nitin Keshvrao	B.Sc. SY

SHIVNERI MAHAVIDYALAYA, SHIRUR
ANANTPAL, DIST. LATUR



CERTIFICATE

This is to certify that, Mr. AHIRRAO PRATHMESH YOGESH having successfully completed the **Certificate course in Elementary Number Theory**. Conducted by **Department of Mathematics**, during the academic year 2022-23.

Hence Certified.

Date: 10.12.2022

Ahira Prathmesh Yogesh
Principal
Department of Mathematics
Shivneri Mahavidyalaya, Shirur

Principal
Shivneri Mahavidyalaya
Shirur, Anantpal, Dist. Latur

SHIVNERI MAHAVIDYALAYA, SHIRUR
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CERTIFICATE

This is to certify that, Miss. **Patil Gayatri Balwant** having successfully completed the **Certificate course in Elementary Number Theory**. Conducted by **Department of Mathematics**, during the academic year 2022-23.

Hence Certified.

Date: 10.12.2022

for MS m.
Principal
Shivneri Mahavidyalaya
Anantpal, Dist. Latour

[Signature]
Principal
Shivneri Mahavidyalaya
Anantpal, Dist. Latour

SHIVNERI MAHAVIDYALAYA, SHIRUR
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CERTIFICATE

This is to certify that, Miss. **Potdar Bhagyshri Madhukar** having successfully completed the **Certificate course in Elementary Number Theory**. Conducted by **Department of Mathematics**, during the academic year 2022-23.
Hence Certified.

Date: 10.12.2022

Signature
Principal
Shivneri Mahavidyalaya
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Signature
Principal
Shivneri Mahavidyalaya
Anantpal, Dist. Latour

SHIVNERI MAHAVIDYALAYA, SHIRUR
ANANTPAL, DIST. LATUR



CERTIFICATE

This is to certify that, Mr. **Dhumale Pratiksha Pramod** having successfully completed the **Certificate course in Elementary Number Theory**. Conducted by **Department of Mathematics**, during the academic year 2022-23.

Hence Certified.

Date: 10.12.2022

Pratiksha Pramod
Dhumale Pratiksha Pramod
Department of Mathematics
Shivneri Mahavidyalaya, Shirur

[Signature]
Principal
Shivneri Mahavidyalaya
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SHIVNERI MAHAVIDYALAYA, SHIRUR
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CERTIFICATE

This is to certify that, Miss. **Badde Shradha Balbhim** having successfully completed the **Certificate course in Elementary Number Theory**. Conducted by Department of Mathematics, during the academic year 2022-23.

Hence Certified.

Date: 10.12.2022

Signature
10/12/2022
SHIVNERI MAHAVIDYALAYA
SHIRUR, ANANTPAL, DIST. LATUR

Signature
SHIVNERI MAHAVIDYALAYA
SHIRUR, ANANTPAL, DIST. LATUR

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ANANTPAL, DIST. LATUR



CERTIFICATE

This is to certify that, Miss. **Shindalkar Mahadevi Pandit** having successfully completed the **Certificate course in Elementary Number Theory**. Conducted by **Department of Mathematics**, during the academic year 2022-23.

Hence Certified.

Date: 10.12.2022

Forwards m
10/12/22
Principal
Shivneri Mahavidyalaya
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Shivneri Mahavidyalaya
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SHIVNERI MAHAVIDYALAYA, SHIRUR
ANANTPAL, DIST. LATUR



CERTIFICATE

This is to certify that, Mr. **Bawale Nitin Keshavrao** having successfully completed the **Certificate course in Elementary Number Theory**. Conducted by **Department of Mathematics**, during the academic year 2022-23.

Hence Certified.

Date: 10.12.2022

Signature
[Faint signature and stamp]

[Faint stamp]
SHIVNERI MAHAVIDYALAYA,
SHIRUR, ANANTPAL, DIST. LATUR

SHIVNERI MAHAVIDYALAYA, SHIRUR
ANANTPAL, DIST. LATUR



CERTIFICATE

This is to certify that, Miss. Patil Shushma Shivraj having successfully completed the **Certificate course in Elementary Number Theory**. Conducted by **Department of Mathematics**, during the academic year 2022-23.

Hence Certified.

Date: 10.12.2022

Signature
Principal
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CERTIFICATE

This is to certify that, Mr. **Rodge Yogesh Sanjay** having successfully completed the **Certificate course in Elementary Number Theory**. Conducted by **Department of Mathematics**, during the academic year 2022-23.

Hence Certified.

Date: 10.12.2022

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Shivneri Mahavidyalaya
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CERTIFICATE

This is to certify that, Mr. **Suravase Shubham Harishchandra** having successfully completed the **Certificate** course in **Elementary Number Theory**. Conducted by **Department of Mathematics**, during the academic year 2022-23.

Hence Certified.

Date: 10.12.2022

Suravase Shubham
10/12/2022
Department of Mathematics
Shivneri Mahavidyalaya, Shirur

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