| Periods: 30 | Total Marks: 50 |
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| | II. |

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: Formats 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 2023-24

| Sr. No. | Name of the Students | Class |
|---------|-------------------------------|------------|
| 1 | Survase Shubham Harishchandra | B.Sc. F.Y. |
| 2 | Kamble Shradha Samadhan | B.Sc. F.Y. |
| 3 | Suryawanshi Vishnu Tukaram | B.Sc. F.Y. |
| 4 | Walande Manoj Baswaraj | B.Sc. F.Y. |
| 5 | Manale Prasad Shivaji | B.Sc. T.Y. |
| 6 | Badde Shraddha Balbhim | B.Sc. T.Y. |
| 7 | Shindalkar Mahadevi Pandit | B.Sc. T.Y. |
| 8 | Patil Sushma Shivraj | B.Sc. T.Y. |
| 9 | Rodge Yogesh Sanjay | B.Sc. T.Y. |
| 10 | Bawale Nitin Keshavrao | B.Sc. T.Y. |

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CERTIFICATE

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Company Class Letur(M.S.)

This is to certify that, Mr. Survase Shubham Harishchandra having successfully completed the Certificate Course in Elementary Number Theory. Conducted by Department of Mathematics, during the academic year 2023-24.

Hence Certified.

Date: 10.09.2023

Dopt. Of Mathematics Shivnari Mahavidyalaya, Shinar Assantpal, Dist. Later (M.C.)



CERTIFICATE

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Latur/M.S.)

This is to certify that, Miss. Kamble Shraddha Samadhan having successfully completed the Certificate Course in Elementary Number Theory. Conducted by Department of Mathematics, during the academic year 2023-24.

Hence Certified.

Date: 10.09.2023

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Dept. Of Mathematics
Shivaeri Mahevidyelaya,
Shirer Aecotomi, Dist. Leter (M.C.)

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CERTIFICATE

Dat Laturity S. J.

This is to certify that, Mr. Suryawanshi Visnu Tukaram having successfully completed the Certificate Course in Elementary Number Theory. Conducted by Department of Mathematics, during the academic year 2023-24.

Hence Certified.

Date: 10.09.2023

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CERTIFICATE

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This is to certify that, Mr. Walande Manoj Baswaraj having successfully completed the Certificate Course in Elementary Number Theory. Conducted by Department of Mathematics, during the academic year 2023-24.

Hence Certified.

Date: 10.09.2023

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CERTIFICATE

rty Commorce & Science)

Dat Latur(M.S.)

This is to certify that, Mr. Manale Prasad Shivaji having successfully completed the Certificate Course in Elementary Number Theory. Conducted by Department of Mathematics, during the academic year 2023-24.

Hence Certified.

Date: 10.09.2023

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Dept. Of Mathematics
Shiveri Mahavidyalaya,
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This is to certify that, Miss. Badde Shraddha Balbhim having successfully completed the Certificate Course in Elementary Number Theory. Conducted by Department of Mathematics, during the academic year 2023-24.

Hence Certified.

Date: 10.09.2023

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Dat Laturity S.)

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 2023-24.

Hence Certified.

Date: 10.09.2023

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CERTIFICATE

This is to certify that, Miss. Patil Sushma Shivraj having successfully completed the Certificate Course in Elementary Number Theory. Conducted by Department of Mathematics, during the academic year 2023-24.

Hence Certified.

Date: 10.09.2023

HEAD
Dept. Of Mathematics
Shiveri Mahavidyalaya,
Shimer Ascaton Dist. Letter (M.C.)

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Shivnori Mehavidyalaya
M. Commorce & Science)

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CERTIFICATE

This is to certify that, Mr. Rodge Yoesh Sanjay having successfully completed the Certificate Course in Elementary Number Theory. Conducted by Department of Mathematics, during the academic year 2023-24.

Hence Certified.

Date: 10.09.2023

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This is to certify that, Mr. Bawale Nitin Keshvrao having successfully completed the Certificate Course in Elementary Number Theory. Conducted by Department of Mathematics, during the academic year 2023-24.

Hence Certified.

Date: 10.09.2023