



Taranath Shikshana Samsthe  
**LAXMI VENKATESH DESAI COLLEGE, RAICHUR-584103.**  
Re-Accredited by NAAC with B Grade



Department of Mathematics  
Add-On Course Documents

Title: **BASICS OF MATHEMATICS**

Academic Year:2022-23

S.No	Particulars
1	Declaration
2	Permission letter
3	BOS Request Letter
4	Brochure
5	Notice
6	Syllabus
7	Timetable
8	Attendance
9	Summary Report
10	Model certificate
11	Question Paper
12	Marks Sheet



Taranath Shikshana Samsthe



**LAXMI VENKATESH DESAI COLLEGE, RAICHUR-584103.**

(Affiliated to Gulbarga University, Kalaburagi. Re-Accredited by NAAC with "B" Grade)


**Dr.Venkatesh B. Devaru, M.Sc.,Ph.D.,MBA.**  
**PRINCIPAL**

Office of the Principal  
Ph:( 08532)-240286, 240707  
Fax:+918532 240707  
e-mail: lvdrcr@gmail.com  
Website: www.lvdcollege.com


Date: 01/09/2022

**TO WHOMEVER IT MAY CONCERN**

This is to certify that, the college has introduced the Add\_On course on, "Basics of Mathematics " with the duration of 30 hours introduced in 2022-23 The said programme is apart from the existing course curriculum.

  
Head of the Department

H. O. D.  
Department of Mathematics  
L.V.D. College, RAICHUR.

  
Principal  
**PRINCIPAL**  
L.V.D. College, RAICHUR-03.



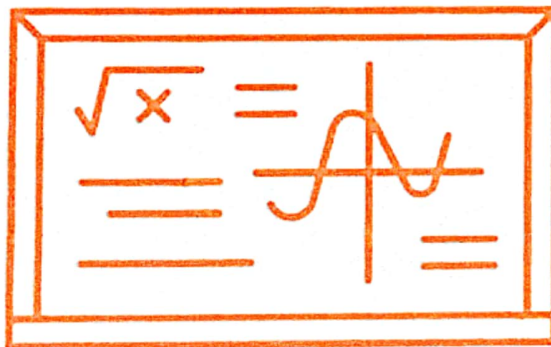
## COURSE INCLUDES

1. Number Theory
2. Set Theory
3. Quadratic Equation
4. Algebra of Matrices
5. Basics of Differentiation
6. Basics of Integration
7. Permutation & Combination
8. Airthematic progression
9. Complex Numbers
10. Logarithms
11. Partial Fractions



## COURSE OUTCOMES

- Students will get knowledge about basics of mathematics.
- Basics of trigonometry.
- Number system.



## TO JOIN CONTACT

- Mrs. Urekha  
(Department Of Mathematics)

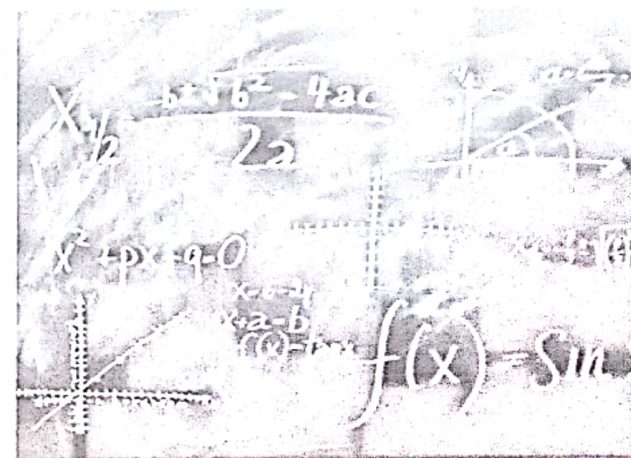


TARANATH SHIKSHANA SAMSTHE

**LAXMI VENKATESH DESAI COLLEGE**

**RAICHUR**

RE-ACCREDITED BY NAAC WITH 'B' GRADE



**DEPARTMENT OF MATHEMATICS**

**2022-23**

OFFERS COURSE ON

**BASICS OF MATHEMATICS**



Date: 1/9/2022


To  
The Principal,  
LVD College,  
Raichur.

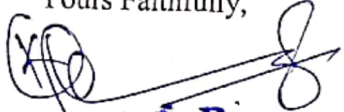
Respected Sir,

Sub: Requisition for the permission to start an Add-On course

We the department of Mathematics requesting you to grant permission to start an Add On course on "BASICS OF MATHEMATICS" for B.Sc I semester students of 2022-23 batch, which helps students to increase their IQ level, memory power & it saves calculation time. The details of related syllabus and its duration are enclosed

Thanking You,

Permitted  


Yours Faithfully,  
  
H. O. D.  
Department of Mathematics  
L.V.D. College, RAICHUR.

From  
HoD,  
Department of Mathematics.

Taranath Shikshana Samste  
**Laxmi Venkatesh Desai College, Raichur**  
Affiliated to Raichur University, Raichur & Re-Accredited by NAAC with B Grade  
Department of Mathematics

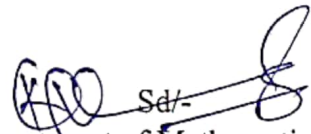
Notice

Interested B.Sc I Semester students of 2022-23 are hereby informed to attend and take the advantage of the ADD ON course on

**“BASICS OF MATHEMATICS”**

Starts on: ~~November~~ 2022 at 4:10 PM to 5:00 PM  
03-10-2022

Date: 03-10-2022

  
Sd/-  
Department of Mathematics

**H. O. D.**  
Department of Mathematics  
L.V.D. College, RAICHUR.

Manjali  
B.Sc 1 year  
(Lab)

Kant  
I year

Vand  
II year

gagan  
BCA II year

**LAXMI VENKATESH DESAI COLLEGE**

**DEPARTMENT OF MATHEMATICS**

**SYLLSBUS OF ADDON COURSE**

**COURSE TITLE- BASICS OF MATHEMATICS**

**Course outcome : Students will get the knowledge of basics of mathematics**

**30 hours**

**Basics of Mathematics**

1. Trigonometry & Allied angles
2. Number Theory
3. Set Theory
4. Quadratic Equation
5. Algebra of Matrices
6. Basics of Differentiation
7. Basics of Integration
8. Permutation & Combination
9. Airthematic Progression & Geometric Progression
10. Statistics
11. Complex Numbers
12. Logarithms
13. Partial Fractions

**References:**

1. Basics concepts of Mathematics and Logic by Michael c. Gemignani
2. Basic Math & Pre-Algebra for Dummies by Mark zigarelli
3. The A to Z of Mathematics by Thomas H Sidebotham
4. Learning Basics Mathematics by John C Hunter,Armstrong,Chouteau



# Laxmi Venkatesh Desai College, Raichur

Affiliated to Gulbarga University, Gulbarga & Re-Accredited by NAAC with B Grade

Class: BA I Sem			Department of Mathematics 2022-23																													
			Course title: <b>BASICS OF MATHEMATICS</b>																		Faculty Name: Husenappa											
Sl.No	Register No	Name of the Student	2/11/22	3/11/22	4/11/22	5/11/22	6/11/22	7/11/22	8/11/22	9/11/22	10/11/22	11/11/22	12/11/22	13/11/22	14/11/22	15/11/22	16/11/22	17/11/22	18/11/22	19/11/22	20/11/22	21/11/22	22/11/22	23/11/22	24/11/22	25/11/22	26/11/22	27/11/22	28/11/22	29/11/22	30/11/22	31/11/22
1	U23AB22A0001	SUMATHI	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
2	U23AB22A0002	RENUKA	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
3	U23AB22A0003	PRIYANKA	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
4	U23AB22A0004	VAMSHI NAYAK	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
5	U23AB22A0010	LAKSHMI	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
6	U23AB22A0012	UDAY KIRAN	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
7	U23AB22A0024	MAHESHWARI	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
8	U23AB22A0029	NAUSHEEN	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
9	U23AB22A0039	R NAGAVENI	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
10	U23AB22A0042	RAJEEV KUMAR	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
11	U23AB22A0044	NARAHARI	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
12	U23AB22A0045	RAVIKIRAN	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
13	U23AB22A0046	AMRUTA	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
14	U23AB22A0050	MOUNESH	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
15	U23AB22A0068	CHANDRASHEKAR	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓

Signature of Faculty

Signature of HOD  
**H. O. D.**  
 Department of Mathematics  
 L.V.D. College, RAICHUR.

Signature of Principal  
**PRINCIPAL**  
 L.V.D. College, RAICHUR-03.





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Department of Mathematics

Report of ADD ON course- **BASICS OF MATHEMATICS** for the year 2022-23

DURATION	STARTED ON	COMPLETED ON	FACULTY NAME	NO.OF STUDENTS	NO. OF CLASSES
2 months	2/11/2022	30/12/2022	Husenappa Asst. prof.	226	31

Basic mathematics course helps the students to understand and analyse the higher mathematics of their academic.



**H. O. D.**  
Department of Mathematics  
L.V.D. College, RAICHUR



Taranath Shikshana Samsthe  
Laxmi Venkatesh Desai College, Raichur  
Re-Accredited by NAAC with B grade  
**DEPARTMENT OF MATHEMATICS**  
**Subject: Basics of Mathematics**



SR.NO	REG.NO.	STUDENT NAME	SIGNATURE	MARKS
1	U23AB22A0001	SUMATHI	<i>S</i>	33
2	U23AB22A0002	RENUKA	<i>R</i>	38
3	U23AB22A0003	PRIYANKA	<i>Priyanka</i>	40
4	U23AB22A0004	VAMSHI NAYAK	<i>V</i>	37
5	U23AB22A0010	LAKSHMI	<i>L</i>	28
6	U23AB22A0012	UDAY KIRAN	<i>U</i>	31
7	U23AB22A0024	MAHESHWARI	<i>M</i>	28
8	U23AB22A0029	NAUSHEEN	<i>N</i>	36
9	U23AB22A0039	R NAGAVENI	<i>RNS</i>	37
10	U23AB22A0042	RAJEEV KUMAR	<i>Rajeev</i>	35
11	U23AB22A0044	NARAHARI	<i>N</i>	36
12	U23AB22A0045	RAVIKIRAN	<i>Ravi</i>	38
13	U23AB22A0046	AMRUTA	<i>Amruta</i>	41
14	U23AB22A0050	MOUNESH	<i>M</i>	31
15	U23AB22A0068	CHANDRASHEKAR	<i>C</i>	29
16	U23AB22A0075	HARIKRISHNA	<i>H</i>	22
17	U23AB22A0077	PRATHIK	<i>P</i>	23
18	U23AB22A0084	P NAGARAJ	<i>PN</i>	29
19	U23AB22A0088	ANILKUMAR	<i>Anil Kumar</i>	31
20	U23AB22A0090	ANIL KUMAR	<i>Anil</i>	32
21	U23AB22A0091	SHIVARAJA	<i>Shaj</i>	33
22	U23AB22A0093	PRABHU KUMAR	<i>Prabhu</i>	36
23	U23AB22A0096	SHIVALINGA	<i>Shivalinga</i>	37
24	U23AB22A0098	ANIL KUMAR	<i>A</i>	39
25	U23AB22A0102	SUNIL KUMAR	<i>S</i>	40
26	U23AB22A0108	NEERAJ	<i>N</i>	36

*G.H.*

*Husenappa*

Name: priyanka  
class: I sem.  
UUCMS No: U23AB2290003  
Taranath Shikshana Samsthe



# Laxmi Venkatesh Desai College, Raichur

Re-Accredited by NAAC with B grade

## DEPARTMENT OF MATHEMATICS

### Subject: Basics of Mathematics

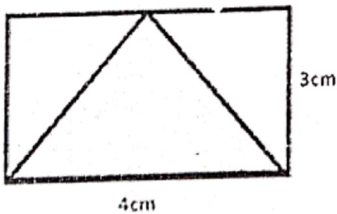
Answer the following questions.

40  
50  
gft.

Date:  
Marks: 1X50=50  
Duration: 1hr

- $0.003 \times 0.02 = ?$   
(A) 0.06  
(B) 0.006  
(C) 0.0006  
 (D) 0.00006
2. What is the average of the numbers: 0, 0, 4, 10, 5, and 5?  
(A) 2  
(B) 3  
 (C) 4  
(D) 5
3. What is the rate of discount if a car which price was \$4,000 was sold for \$3,200?  
(A) 14%  
(B) 16%  
(C) 18%  
 (D) 20%
4.  $|-4| + |4| - 4 + 4 = ?$   
(A) 0  
(B) 2  
(C) 4  
 (D) 8
5. What is the value of x in the equation  $3x - 15 - 6 = 0$ ?  
 (A) 7  
(B) 8  
(C) 9  
(D) -9

6. What is the area in  $\text{cm}^2$  of the shaded region in the diagram below?



- (A) 6  
(B) 7  
(C) 8  
(D) 9



If A completes a particular work in 8 days and B completes the same work in 24 days. How many days will it take if they work together?

- (A) 4
- (B) 5
- (C) 6
- (D) 7

8. What comes next in the sequence: 1, 3, 11, 43, \_\_\_\_?

- (A) 161
- (B) 171
- (C) 181
- (D) 191

9. What is the distance traveled by a car which traveled at a speed of 80 km/hr for 3 hours and 30 minutes?

- (A) 275 km
- (B) 280 km
- (C) 285 km
- (D) 290 km

10. In a class of 40 students 20% are girls. How many boys are there in the class?

- (A) 26
- (B) 28
- (C) 30
- (D) 32

11.  $2 + 2 - 2 \times 2 \div 2 = ?$

- (A) 0
- (B) 1
- (C) 2
- (D) 4

12.  $|2| + |-2| + (2)^2 + (-2)^2 = ?$

- (A) 6
- (B) 8
- (C) 10
- (D) 12

13. If  $x = -1$ , then what is the value of the function  $f(x) = x^3 + 4x + 12$

- (A) 7
- (B) 9
- (C) 11
- (D) 13

14. If  $\frac{x}{2} + 4 = \frac{7}{2}$  then  $x = ?$

- (A) -2
- (B) -1
- (C) 1
- (D) 2



15. What comes next in the sequence: 2, 4, 10, 28, \_\_\_?

- (A) 64
- (B) 70
- (C) 76
- (D) 82

16. What are the values of  $x$  and  $y$  in the following pair of equations  $X^2-2y=42$ ;  $X+2=5$

- (A)  $x = -2, y = -6$
- (B)  $x = 2, y = 6$
- (C)  $x = -3, y = -6$
- (D)  $x = 3, y = 6$

17. How many feet there are in 5 meters? If 1 meter = 3.281 feet.

- (A) 15.505
- (B) 15.905
- (C) 16.405
- (D) 16.805

18.  $0.003 \times 0.0004 = ?$

- (A) 0.0012
- (B) 0.00012
- (C) 0.000012
- (D) 0.0000012

19. What is average (Arithmetic Mean) of the numbers: 2, 4, 5, 0, 9, 10, and 12?

- (A) 5
- (B) 6
- (C) 7
- (D) 8

20.  $(2^2)^3 \times (2^3)^2 = ?$

- (A) 4096
- (B) 4046
- (C) 3096
- (D) 3046

21. If A completes a particular work in 4 days and B completes the same work in 12 days. How many days will it take if they work together?

- (A) 1
- (B) 2
- (C) 3
- (D) 4
- (E) 5

22. In the total investment of \$500,000, B's share is 20%. While A's share is 40% of the B's. What is the share of A?

- (A) \$32,000
- (B) \$34,000
- (C) \$36,000
- (D) \$38,000
- (E) \$40,000



The cost of 12 eggs is \$40. What will be the cost of 3 eggs?

- (A) \$10
- (B) \$11
- (D) \$12
- (E) \$13

~~1~~

24. If the sum of two numbers is 16, and their product is 63. Then the larger number is

- (A) 9
- (B) 10
- (C) 11
- (D) 12
- (E) 13

~~1~~

25. The sum of three consecutive even numbers is 78. What is the largest number?

- (A) 22
- (B) 24
- (C) 26
- (D) 28
- (E) 30

~~1~~

26. What is the number, if 40% of the number is 380?

- (A) 930
- (B) 935
- (C) 940
- (D) 945
- (E) 950

~~1~~

27. A boy sold his bicycle for \$2400 and earned 20% profit. What was the original price (the price without the profit) of the bicycle?

- (A) \$1940
- (B) \$1960
- (C) \$1980
- (D) \$2000
- (E) \$2020

~~0~~

28. What comes next in the sequence: 1, 1, 2, 6, 24, \_\_\_\_?

- (A) 110
- (B) 120
- (C) 130
- (D) 140
- (E) 150

~~0~~

29. What is the 81<sup>st</sup> number in the sequence: 1, 4, 7, 10, .....,  $a_{81} = ?$

- (A) 237
- (B) 241
- (C) 245
- (D) 249
- (E) 253

~~1~~

30. Suppose Rs.1,000 is deposited into a savings account that earns Compounded interest at an a rate of 5%. How much will be in the account after 2 years if the interest is compounded annually?

- (A) Rs.1102.5
- (B) Rs.1110.5
- (C) Rs.1112.5

~~0~~



1120.5  
s. 1122.5

1. 1, 2, 5, 14, \_\_\_\_\_ ?  
(A) 38  
(B) 39  
(C) 40  
(D) 41

✓

32. The value of the function  $f(x) = x^2 - 6x + 7$  at  $x = 2$  is?  
(A) 1  
(B) -1  
(C) 2  
(D) -2

✓

33.  $-1^2 + (-1)^2 = ?$   
(A) 0  
(B) 1  
(C) 32  
(D) -32

✓

34. What is the sum of the first 12 numbers of the series: 2, 6, 10, 14, .... ?  
(A) 260  
(B) 268  
(C) 280  
(D) 288

✓

35. What is the inverse of the function  $f(x) = 2x - 3$   
(A)  $3 - 2x$   
(B)  $1 - 2x$   
(C)  $2x - 1$   
(D)  $\frac{x+3}{2}$

✓

36.  $|2| - |-2| - 2^2 - (-2)^2 = ?$   
(A) -8  
(B) -6  
(C) -4  
(D) -2

✓

37. What is the sum of the sequence:  $2+4+6+ \dots +98+100 = ?$   
(A) 2450  
(B) 2500  
(C) 2550  
(D) 2600

✓

38. What is the sum of the numbers: 1, 2, 3, 4, ..... 99, 100 ?  
(A) 5000  
(B) 5050  
(C) 5100  
(D) 5150

✓

class of 60 students the ratio of boys to girls is 3:2. How many girls are there in the class?

- (A) 22
- (B) 23
- (D) 24

40. What is the volume of a right-circular cylinder in  $\text{cm}^3$  having radius 2cm and height 7cm?

- (A)  $86 \text{ cm}^3$
- (B)  $88 \text{ cm}^3$
- (C)  $90 \text{ cm}^3$
- (D)  $92 \text{ cm}^3$

41. What is the average of the numbers: 2, 5, 0, 10, 10, 12, 8 and 9?

- (A) 6
- (B) 7
- (C) 8
- (D) 9

42. If 75 percent of a number is y. And, 80 percent of y is 60, then what is the number?

- (A) 100
- (B) 110
- (C) 120
- (D) 130

43. The cost of an article is Rs.160. What should be the selling price in rupees to obtain a profit of 15 percent?

- (A) 180
- (B) 182
- (C) 184
- (D) 186

44. There are 20 Multiple Choice Questions (MCQs) in an exam with 4 options in every question. A student attempted the exam just on random guessing. How many questions (according to probability) he will attempt correctly?

- (A) 4
- (B) 5
- (C) 6
- (D) 7

45. A person preparing for Olympics Games ran 9 km in 1 hour and 20 minutes, and then 12 km in 1 hour and 40 minutes. What is the average speed in km/hr?

- (A) 4 km/hr
- (B) 5 km/hr
- (C) 6 km/hr
- (D) 7 km/hr

46. In a town of population 100,000, 20% have internet connection. And those who have internet connection, 15% use PTCL internet service. How many people have internet service other than PTCL?

- (A) 3,000
- (B) 7,000
- (C) 12,000
- (D) 17,000





car parking charges  $n$  dollars for the first hour, and  $m$  pence for every additional hour. What amount it will charge if a car stayed for 5 hours?

- (A)  $n + 5m$
- (B)  $n + 4m$
- (C)  $m + 4n$
- (D)  $m + 5n$

1

48. What is the value of  $x$  in the equation:  $0.2x - 0.03 = 0.4 \times 0.05$  ?

- (A) 0.20
- (B) 0.02
- (C) 0.25
- (D) 0.025

1

49. Bilal's salary is 120% of Ahmed salary. And, Saba's salary is 60% of Ahmed's salary. The total of all three salaries is Rs. 112,000. What is Saba's salary?

- (A) Rs. 24,000
- (B) Rs. 24,500
- (C) Rs. 25,000
- (D) Rs. 25,500

0

50. What is the solution set of the equation:  $x^2 + 4x + 3 = 0$

- (A) {1, 3}
- (B) {-1, 3}
- (C) {1, -3}
- (D) {-1, -3}

1



ANSWERS: BASIC MATHEMATICS MCQS

1. (D) 0.00006
2. (C) 4
3. (D) 20%
4. (D) 8
5. (A) 7
6. (A) 6
7. (C) 6
8. (B) 171
9. (B) 280 km
10. (D) 32
11. (C) 2
12. (D) 12
13. (A) 7
14. (B) -1
15. (D) 82
16. (D)  $x = 3, y = 6$
17. (C) 16.405
18. (D) 0.0000012
19. (B) 6
20. (A) 4096
21. (C) 3
22. (E) \$40,000
23. (B) \$10
24. (A) 9
25. (D) 28
26. (E) 950
27. (D) \$2000
28. (B) 120
29. (B) 241
30. (A) Rs.1102.5
31. (D) 41
32. (B) -1
33. (A) 0
34. (D) 288
35. (D)  $\frac{a+3}{2}$
36. (A) -8
37. (C) 2550
38. (B) 5050
39. (D) 24
40. (B) 88 cm<sup>2</sup>
41. (B) 7
42. (A) 100
43. (C) 184
44. (B) 5
45. (D) 7 km/hr

- 17,000  
(B)  $n + 4m$   
(C) 0.25  
49. (A) Rs.24,000  
50. (D)  $\{-1, -3\}$





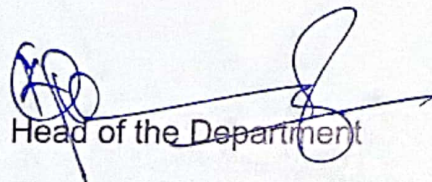
Taranath Shikshana Samsthe

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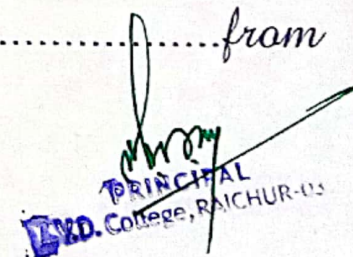
(Re-Accredited by NAAC with 'B' Grade)

## Certificate

This is to Certify that Miss. / Mr. Priyanka  
 of BA I sem has completed the Certificate Course in  
Basics of Mathematics  
 Conducted by the Department of Mathematics from  
2-11-2022 to 30-12-2022

  
 Head of the Department



  
 PRINCIPAL  
 L.V.D. COLLEGE, RAICHUR-03  
 Principal