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(Bridge Course)

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VIDYA VIKAS SHIKSHAN SANSTHA, HINGANGHAT
VIDYA VIKAS ARTS, COMMERCE & SCIENCE COLLEGE
SAMUDRAPUR, DIST. WARDHA (MAHARASHTRA)
AFFILIATED TO R.T.M. NAGPUR UNIVERSITY

DEPARTMENT OF MATHEMATICS

Organizes

Bridge Course

(For B.Sc. First year)

Date : 16th to 27th July 2024

HOD
(Dr. Shilpa W. Samdurkar)


Vidya Vikas Arts, Commerce and Science College, Samudrapur

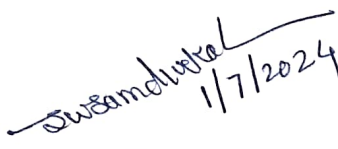
Department of Mathematics

Syllabus of Bridge Course: 2024-25

B.Sc. Ist year Major - Mathematics

Days	Topic
Day 1	Complex Number, Basic Properties
Day 2	Matrices, Definitions, Rank of matrices
Day 3	Indeterminate forms, seven indeterminate forms
Day 4	Partial derivatives, Homogeneous function, Jacobians
Day 5	Taylor's series of one variable
Day 6	Taylor's series of two variable
Day 7	Minima & Maxima of one variable
Day 8	Theory of equation, relation between the roots and coefficients
Day 9	Elementary number theory, basic properties of congruence, linear congruence
Day 10	Integration of algebraic rational functions, trigonometric function, irrational functions


Principal
Vidya Vikas Art's Commerce
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Dist. Wardha 442305


HOD
(Dr. S. W. Samduskar)
1/7/2024

DEPARTMENT OF MATHEMATICS

SESSION: 2024-25

BRIDGE COURSE

CLASS: B.SC I YEAR

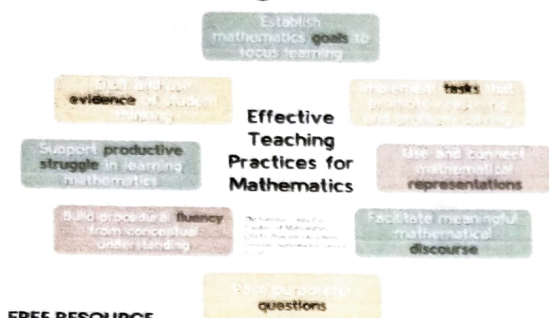
TIME-TABLE

DAY	DATE	TIME	TOPIC TO BE COVERED
TUE	16/07/24	11.15 am -12.15 pm	Complex Number, Basic Properties
THUR	18/07/24	11.15 am -12.15 pm	Matrices, Definitions, Rank of matrices
FRI	19/07/24	11.15 am -12.15 pm	Indeterminate forms, seven indeterminate forms
SAT	20/07/24	11.15 am -12.15 pm	Partial derivatives, Homogeneous function, Jacobians
MON	22/07/24	11.15 am -12.15 pm	Taylor's series of one variable
TUE	23/07/24	11.15 am -12.15 pm	Taylor's series of two variable
WED	24/07/24	11.15 am -12.15 pm	Minima & Maxima of one variable
THUR	25/07/24	11.15 am -12.15 pm	Theory of equation, relation between the roots and coefficients
FRI	26/07/24	11.15 am -12.15 pm	Elementary number theory, basic properties of congruence, linear congruence
SAT	27/07/24	11.15 am -12.15 pm	Integration of algebraic rational functions, trigonometric function, irrational functions
TUE	30/07/24	11.15 am -12.15 pm	Aptitude Test

Susandakal

HOD

Effective Mathematical Teaching Practices

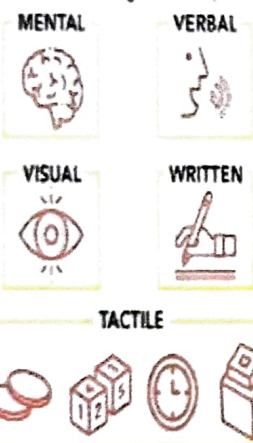


TYPES OF LEARNERS*



10

Our Teaching Techniques



MATHNASIUM

BASIC MATH TEACHING STRATEGIES

The building blocks of mathematics start early on, when learning the basic skills. The key to teaching basic math skills that students can apply and remember for future instruction is to use several teaching strategies.

- Repetition**
Repeating a skill or concept over and over again helps students to learn and remember it. This can be done through drills, flashcards, or other methods.
- Timed testing**
Testing students on a skill or concept under a time limit helps them to learn and remember it. This can be done through timed tests or quizzes.
- Pair Work**
Having students work together to solve a problem or complete a task helps them to learn and remember it. This can be done through partner work or group work.
- Manipulation Tools**
Using physical objects to represent mathematical concepts helps students to learn and remember it. This can be done through manipulatives like blocks, beads, or paper clips.
- Math games**
Playing games that involve math helps students to learn and remember it. This can be done through board games, card games, or other math-related games.

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Dr. K.G. Rewatkar
Principal

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(NAAC Accredited B++ 2022)

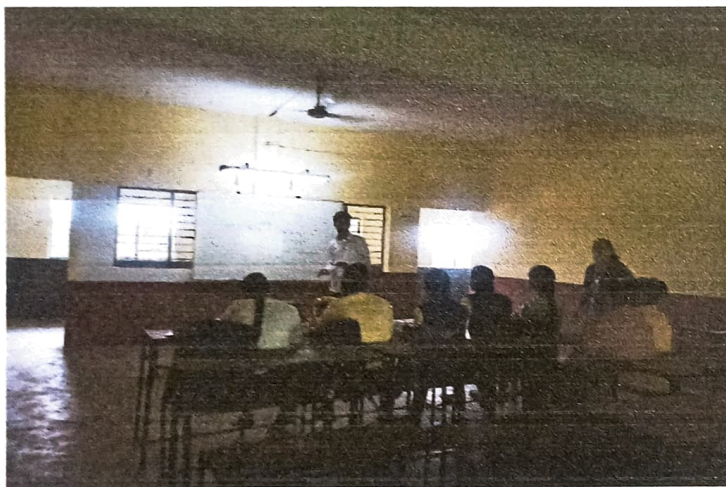
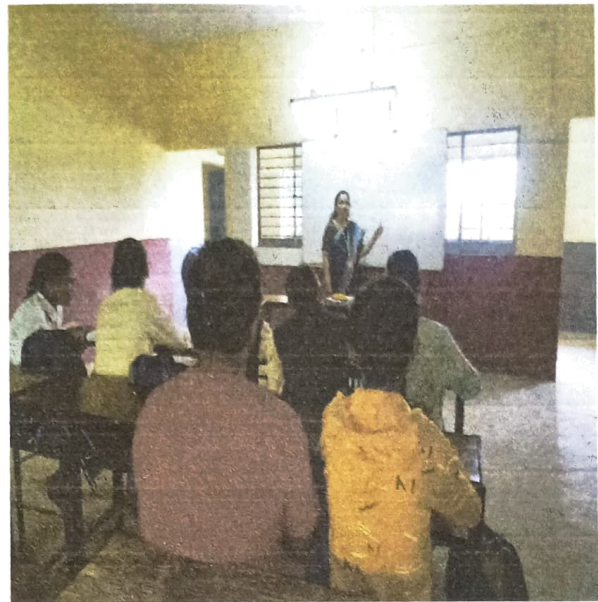
Bridge Course Report

- **Name of Program:** Bridge Course
- **Name of the Organizing Department:** Mathematics
- **Date/Duration:** 16th July to 27th July 2024
- **Class :** B.Sc. 1st year (Major-Mathematics)
- **Number of Students:** 11
- **Name of Organizer :** Dr. Shilpa W. Samdurkar
- **Introduction:**

The bridge course was created to assist students in moving from one educational level to the next. It was specifically for those transitioning from higher secondary to college, or from college to university. The course aimed to enhance students' academic abilities and knowledge in mathematics, including writing, reading, and practice. Therefore, the Department of Mathematics offered the bridge course from July 16 to July 27, 2024, to the first-year students of Bachelor of Science (B.Sc.) program. This course provided extra support through mentoring to boost the students' confidence. The course was held in their regular classes according to the schedule. Following the completion of the course's syllabus, an aptitude test was administered on July 30, 2024, and the results were announced the following day.

- **Objective of the event:**
 - To build up their confidence about the subject.
 - To bridge the gap between subject studied at pre-level and subject they would be studying in graduation .

- **Photograph**



- **Outcomes:**

- 1) Students were improved their basic knowledge of the subject.
- 2) Slow learner was boost up their confidence.

Date: 10 August 2024

Place: Samudrapur

S. W. Samdurkar
Organiser

(Dr. S. W. Samdurkar)

K. G. Rewatkar
Principal

(Dr. K. G. Rewatkar)

Principal
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& Science College, Samudrapur
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**VIDYA VIKAS ARTS, COMMERCE AND SCIENCE COLLEGE,
SAMUDRAPUR, DIST. WARDHA**

2024-25

BRIDGE COURSE PRESENTY RECORD

(16th July to 27th July 2024)

No.	Full Name of Students	16 July	18 July	19 July	20 July	22 July	23 July	24 July	25 July	26 July	27 July 24
1	Samyak M. Fusate	P	P	P	.	P	P	P	P	P	P
2	Prajwal V. Rokde	.	P	P	P	P	P	P	P	P	P
3	Monali P. Dandekar	P	P	P	P	P	P	P	P	P	P
4	Samiksha S. Mele	P	P	P	P	.	P	P	P	P	P
5	Pratik G. Bhoyar	P	P	P	P	P	P	.	P	P	P
6	Sayali D. Chudduke	P	.	P	P	P	P	P	P	P	P
7	Shrawani S. Meshram	P	P	P	P	P	P	P	P	P	P
8	Isha V Tulankar	P	P	P	P	P	P	P	.	P	P
9	Gaurav K. Hiwarkar	P	P	P	P	P	P	P	P	P	.
10	Suhani N Gurnule	P	P	P	P	P	P	P	P	P	P
11	Pooja J. Bhure	P	P	P	P	.	P	P	P	P	P

S. W. Samduskar
30/7/2024
HOD
(*Dr. S. W. Samduskar*)

[Signature]
Principal
Vidya Vikas Art's Commerce
& Science College, Samudrapur
Dist. Wardha 442305

Vidya Vikas Arts, Commerce and Science College, Samudrapur
Department of Mathematics

Bridge Course 2024-25

Aptitude Test paper

Date : 30th July 2024

Maximum Marks: 15

Note : solve any **THREE** questions from the following

Q.1) Find first order derivative of

$$z = \sin^{-1} x + \sin^{-1} y$$

Q.2) Find ^{derivative} ~~Jacobians~~ of $f(x, y)$

$$f = x^3 + 6xy^2 + 8$$

Q.3) find $A+B$ and $A-B$

$$\text{Where } A = \begin{bmatrix} 1 & 2 \\ 2 & -1 \end{bmatrix} \text{ and } B = \begin{bmatrix} 0 & 3 \\ -2 & 1 \end{bmatrix}$$

Q.4) Find $\frac{d^2 f}{dx^2}$ if $f = \sin 4x$

Q.5) Find maxima or minima of the function

$$f = 8x^2y + 6y^2 + 3$$

VIDYA VIKAS ARTS, COMMERCE AND SCIENCE COLLEGE,
SAMUDRAPUR, DIST. WARDHA

2024-25

BRIDGE COURSE

Aptitude Test Attendance

(16th July to 27th July 2024)

Sr.No.	Full Name of Students	Signature
1	Samyak M. Fusate	<i>Samyak</i>
2	Prajwal V. Rokde	<i>Prajwal</i>
3	Monali P. Dandekar	<i>M. Dandekar</i>
4	Samiksha S. Mele	<i>Samiksha</i>
5	Pratik G. Bhoyar	<i>Pratik</i>
6	Sayali D. Chudduke	<i>Sayali</i>
7	Shrawani S. Meshram	<i>Shrawani</i>
8	Isha V Tulankar	<i>Isha</i>
9	Gaurav K. Hiwarkar	<i>Gaurav</i>
10	Suhani N Gurnule	<i>Suhani</i>
11	Pooja J. Bhure	<i>Pooja</i>

Susamudkar
30/7/2024
HOD
(Dr. S.W. Samudkar)

EJ
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**VIDYA VIKAS ARTS, COMMERCE AND SCIENCE COLLEGE,
SAMUDRAPUR, DIST. WARDHA**

2024-25

Sem I : BRIDGE COURSE MARKSHEET

Sr.No	Full Name of Students	Marks Obtained (15)
1	Samyak M. Fusate	11
2	Prajwal V. Rokde	12
3	Monali P. Dandekar	14
4	Samiksha S. Mele	12
5	Pratik G. Bhoyar	08
6	Sayali D. Chudduke	10
7	Shrawani S. Meshram	11
8	Isha V Tulankar	09
9	Gaurav K. Hiwarkar	10
10	Suhani N Gurnule	11
11	Pooja J. Bhure	13

Date:30/07/2024

Susamdyka
H.O.D. 30/7/24


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