

Date: 16/09/2022

Bunts Sangha's

S. M. Shetty College of Science, Commerce & Management Studies, Powai

Permanently Affiliated to University of Mumbai

Department of Data Science

NOTICE

This is to inform all the students of first year BSc Data Science that the Department of Data Science is organizing a **Bridge Course on Mathematics and Statistics** for eligibility to B.Sc. Data Science Programme as per the guidelines by the University of Mumbai vide circular no. AAMS_UGS/ICD/2022-23/99 dated 15-09-2022, Ordinance No: 6606.

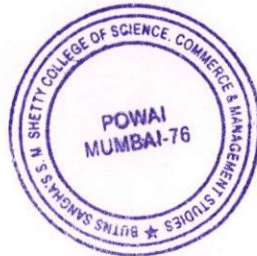
The students who have not opted for Mathematics during their class 12 will have to complete the bridge course for being eligible for the admission to First Year of B.Sc. Data Science.

The training should be for 30 hours, 2 hours session on each of the following topics followed by examination of 50 marks with 5 marks questions on each of the following topics.

Measurement of Angles	Trigonometric Functions	Trigonometric Functions of compound Angles
Linear in-equations	Determinants	Logarithms
Permutations and Combinations	Mathematical Induction	Binomial Theorem
Integration	Statistics	Probability
Sequences	Differentiation	Factorization Formulae



Course Coordinator



Principal

Bunts Sangha's S. M. Shetty College
of Science Commerce & Management Studies
Powai, Mumbai - 400 076.

Date: 17/12/2022

Bunts Sangha's
S. M. Shetty College of Science, Commerce & Management Studies, Powai
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Department of Data Science
Report on Bridge Course of Mathematics and Statistics

Date: 20th September-22 to 15th December-22

The Department of Data Science has conducted Bridge Course on Mathematics and Statistics for the learners of first year BSc Data Science from 20th September-22 to 15th December-22. The Bridge Course classes were taken by Prof. Suman Upadhyay and Prof. Namarata Dubey.

This bridge course is conducted for the students of first year BSc Data Science who were not having Mathematics or Statistics in their HSC in order to fulfill the eligibility of Data Science course admission.

Total 5 Students in above case have participated in the course and after evaluation they have successfully completed the course.

Outcome: The learners were very happy with the Bridge Course Classes. Many concepts of Mathematics and Statistics got clear in lectures and this will help students to understand the content mentioned in Descriptive Statistics and Precalculus syllabus given by University of Mumbai.

Sujay
Namarata Dubey

Subject Teachers



Tushar

Course Co-ordinator

FYBSC DATA SCIENCE
MATHEMATICS BRIDGE COURSE EXAMINATION-2022
ATTENDANCE SHEET-2022

		Time	Date	10-20-12-00	10-20-12-00	10-20-12-00	10-20-12-00	10-20-12-00	10-20-12-00	10-20-12-00
	Topic Covered			Permutation & Combinator	Mathematical Induction	Binomial Theorem	Differenti- ation	Integration	Statistics	Probability
Sr. No.	Name of the Students	Date	20-09-22	27-09-22	06-10-22	13-10-22	20-10-22	27-10-22	03-11-22	
1	Bhanushali Dhaval Deepak		AD	AD	AD	AD	AD	AD	AD	AD
2	Gore Sanskruti Anuroop		Gone	Gone	Gone	Gone	Gone	Gone	Gone	Gone
3	Jalindre Mehul Praful		AD	AD	AD	AD	AD	AD	AD	AD
4	Kazi Alfiya Hanif		AD	AD	AD	AD	AD	AD	AD	AD
5	Khan Mohd Afzal Dildar Husain		AD	AD	AD	AD	AD	AD	AD	AD
6										

Tushar
 Course coordinator



Sujay
 Course Teacher Statistics/Maths

Namrata Duse


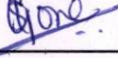
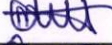
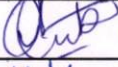
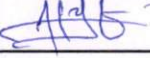
FYBSC DATA SCIENCE
MATHEMATICS BRIDGE COURSE EXAMINATION-2022
ATTENDANCE SHEET-2022


	Time	Date	10.20-12.00	10.20-12.00	10.20-12.00	10.20-12.00	10.20-12.00	10.20-12.00	10.20-12.00
	Topic Covered		Measurement of angles	Trigonometric functions	Trigonometric functions of compound Angles	factorization formulae	Linear Inequalities	Determinants Logarithms	Sequences
Sr. No.	Name of the Students	Date	11-11-22	17-11-22	24-11-22	01-12-22	08-12-22	10-12-22	12-12-22
1	Bhanushali Dhaval Deepak		PP	PP	PP	PP	PP	PP	PP
2	Gore Sanskruti Anuroop		Gone	Gone	Gone	Gone	Gone	Gone	Gone
3	Jalindre Mehul Praful		Out	Out	Out	Out	Out	Out	Out
4	Kazi Alfiya Hanif		Out	Out	Out	Out	Out	Out	Out
5	Khan Mohd Afzal Dildar Husain		AP/G	AP/G	AP/G	AP/G	AP/G	AP/G	AP/G
6									

Tushar
 Course Coordinator



Namrata Dube
 Course Teacher Mathematics/stat

FYBSC DATA SCIENCE		
MATHEMATICS BRIDGE COURSE EXAMINATION-2022		
ATTENDANCE SHEET-2022		
Sr. No.	Name of the Students	Signature
1	Bhanushali Dhaval Deepak	
2	Gore Sanskruti Anuroop	
3	Jalindre Mehul Praful	
4	Kazi Alfiya Hanif	
5	Khan Mohd Afzal Dildar Husain	
6		


 course coordinator




 Supervisor

FYBSC DATA SCIENCE
MATHEMATICS BRIDGE COURSE EXAMINATION-2022
Marks SHEET-2022

Sr. No.	Name of the Students	Marks
1	Bhanushali Dhaval Deepak	43
2	Gore Sanskruti Anuroop	36
3	Jalindre Mehul Praful	20
4	Kazi Alfiya Hanif	22
5	Khan Mohd Afzal Dildar Husain	20
6		



Tush

Course Coordinator

Namrata Dube

Teacher 1

Raman

Teacher 2

FYBSC DATA SCIENCE

MATHEMATICS BRIDGE COURSE EXAMINATION-2022

Subject- Mathematics

Max Marks. 50 Marks

Duration: 1 hour 30 mins

Q.1) Attempt any FIVE 25 marks

1. Solve: $2(x - 1) < 3x - 2$ where $x \in \{-3, -2, -1, 0, 1, 2, 3\}$ 5 marks

2. A card is drawn from a well shuffled pack of cards. Find the probability that it is 5 marks

- (i) a red card
- (ii) a black queen
- (iii) a red picture card

3. From the following data, find the mean marks. 5 marks

Marks	0-10	10-20	20-30	30-40	40-50
No. of students	10	8	15	20	9

4. Factorize: (i) $10ab + 4a + 5b + 2$ 5 marks
(ii) $x^2 - 16$

5. If 4, 7, 10, 13, 16, 19, 20..... is a sequence, then find 5 marks

- (i) common difference
- (ii) n^{th} Term
- (iii) 21st term.

6. Find the sum of first five terms of geometric progression (G.P.) 5 marks
2, 8, 32, 128, 512.....

7. Find the arithmetic mean for the following frequency distribution. 5 marks

Age in years	0-20	20-40	40-60	60-80	80-100
No. of persons	4	5	8	11	5

Q.2) Attempt any FIVE 25 marks

1 Solve following: 5 marks

- i. $\frac{8!}{6!}$
- ii. $5! \times \frac{6!}{3!}$
- iii. $5!$

2 Find the derivatives of following 5 marks

- i. $\log x$
- ii. $x \times \sin x$
- iii. $\frac{x^2}{e^x}$

3 What is permutation. In how many ways 5 people can be arranged on two chairs? 5 marks

4 What is combination. How many teams of 4 members can be formed out of 6? 5 marks

5 Find the determinants of following matrices 5 marks

i. $\begin{bmatrix} 6 & 1 \\ 2 & -4 \end{bmatrix}$

ii. $\begin{bmatrix} 4 & -1 & 2 \\ 0 & -2 & 3 \\ 4 & 6 & 8 \end{bmatrix}$

6 State the value of following trigonometric functions: 5 marks

i. $\sin \frac{\pi}{6}$

ii. $\tan \frac{\pi}{2}$

iii. $\cos n\pi$

iv. $\sec \frac{\pi}{3}$

v. $\operatorname{cosec} \frac{\pi}{4}$

7 In how three-digit numbers can be formed using 0, 1, 2, 3, 4, 5. 5 marks
