WALL MAGAZINE 2021-2022

Several departments maintain wall magazine to enlighten students on popular articles in concern subjects regarding research and updates. students are getting benefitted by going through the wall magazines. They will come to know about various important issues published in magazines and news papers. students improve their reading abilities and research aptitude.


WALL MAGAZINE
5 health benefits of including coconut oil in your diet
Food trends that will RULE 2019
Your guide to an anti-inflammatory diet
Malnutrition remains risk factor for 68% child deaths
HEALTHY LIVING
Natural painkillers in your kitchen
More than 80% of Indians suffer protein deficiency, reveals study
Nutrition News
అగ్గువకే ఆరోగ్యకర ఆహారం
బరువు కోసం నెరేడు

Wall Magazine

Dept of Sanskrit

"Brahmagupta's 18 laws of mathematics are completely missing from India's present mathematics curriculum."

India is known to be the birthplace of modern mathematics. Yet, many Indian school-going children lack proper understanding of mathematical concepts.

Australian mathematics historian Jonathan J. Crabtree was apprehensive of mathematics as a student like many of his classmates. He felt there was a need to better explain the laws and rules of mathematics. Over the years, Crabtree has retraced the origin of mathematics and looked it to ancient Indian wisdom. He found that India's definition of zero never made it to Europe. The disconnect between western mathematical explanations from the original teachings of ancient Indian mathematicians like Brahmagupta, Mahāvīra (c. 850) or Bhāskara (c. 1150) was identified by Crabtree as a major contributing factor. BE's Isha Chakraborty spoke to him.

Jonathan J. Crabtree

Q. Why and when did you feel that there were some mistakes in basic mathematical concepts?

A. Fifty years ago, in 1968, my Class 2 teacher gave me the wrong explanation of multiplication. People have said $a \times b$ equals a added to itself b times for centuries. Yet this leads to $1 \times 1 = 2$. When asked *'what is two added to itself three times'*, I said 8. My answer was correct, yet the explanation of 2×3, was wrong. The correct explanation for $a \times b$ is a added to India's zero b times, which simply leads to $0 + 2 + 2 + 2$.

Q. What according to you is the reason for these mistakes?

A. These mistakes were made because England developed the way elementary mathematics was taught since the 16th century. The ancient Greek mathematicians didn't consider zero and one to be numbers. Without zero, they also didn't have a concept of negative numbers. Therefore, the English definition of multiplication emerged with an error when translated from ancient Greek in 1570.

Unfortunately, the English then exported their mathematics to their settlements and colonies, infecting the world's mathematics with a logic 'virus'. Similarly, one was also omitted from the definition of exponentiation.

Consider a to the power of b, which is wrongly said to be a time itself b times. We must return one to the definition, so a to the power of 3, becomes 1 into a, 3 times, or $1 \times a \times a \times a$. Definitions of multiplication and exponentiation need fixing as does the definition of zero. Notably, the 7th century as does the definition of zero. Notably, the 7th century mathematical laws of India's Brahmagupta are consistent with the laws of the Universe, which is what you expect as Brahmagupta was an astronomer. Today, children are told that negative numbers are defined as being less than zero, yet this is mathematically and historically incorrect. The Chinese were using negative and positive numbers for around 1400 years before they adopted India's zero. So the Chinese could never have considered negatives numbers less than zero. Instead, they just viewed negatives as equal and opposite to positives, which is consistent with science and their philosophy of Yin and Yan. Free slides for readers are at www.bit.ly/NewMaths.

Q. How do you think these changes can be implemented in the existing educational system?

A. As I toured some schools and gave mathematical lessons to more than 500 students ranging from Class 7 to Class 9, I explained Brahmagupta's laws of mathematics and asked them to tell me what they preferred. The children said they prefer India's own explanations of mathematics.

Brahmagupta's powerful set of 18 laws of mathematics are completely missing from India's present mathematics curriculum. So, I converted Brahmagupta's laws of maths into fun games for children. Hopefully, that will help in mitigating the fear of positive and negative numbers. Indian children have been forced to learn mathematics through bad pedagogies that do not resonate with them. How else could India perform second and third to last out of 34 participants in maths, ahead only of Kyrgyzstan, in a recently concluded global mathematical event? India had its true superior mathematical heritage stolen from it. My mission is simply to return the amazing simplicity and power of India's own mathematics to its people. ■ *Note: Text published in daily.*

"Whenever I give a lecture on Quantum Physics, I feel as if I am talking on Vedanta!"

I studied matter for the last 35 years, only to find out that it does not exist! I have been studying something that does not exist'. - exactly what Adi Shankara said long back from the Upanishads

All that you see doesn't exist


Department of Botany-Innovative practices
QR Code Generation
Generation of QR Code to the Flora of the College(For 94 Plant Species)
People are often curious toknow about a plant that is in front of them but may not know what to look for, even if they were to do a Google search.
QR codes (short for Quick Response) are barcodes that can be read by mobile phone (smartphone) cameras.
Anyone with a smartphone can download a QR code scanning app, scan the code and see the scientific name, family and uses of the plant. After that, there is massive amounts of information one can find on the internet
Best Practice- Maintenance of Vermi Compost Pit
BEST PRACTICES-MEDICINAL GARDEN
Student-Research
Hydroponics- An alternative farming practice
Samsung 64 MP Camera

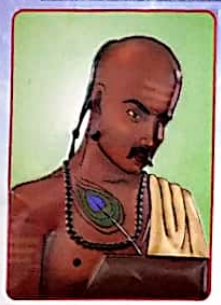

Top Biotech and Bio-Pharmaceutical Companies & Startups in India
SCIENCE DAY CELEBRATION

GALLERY OF MATHEMATICIANS

INDIAN MATHEMATICIANS

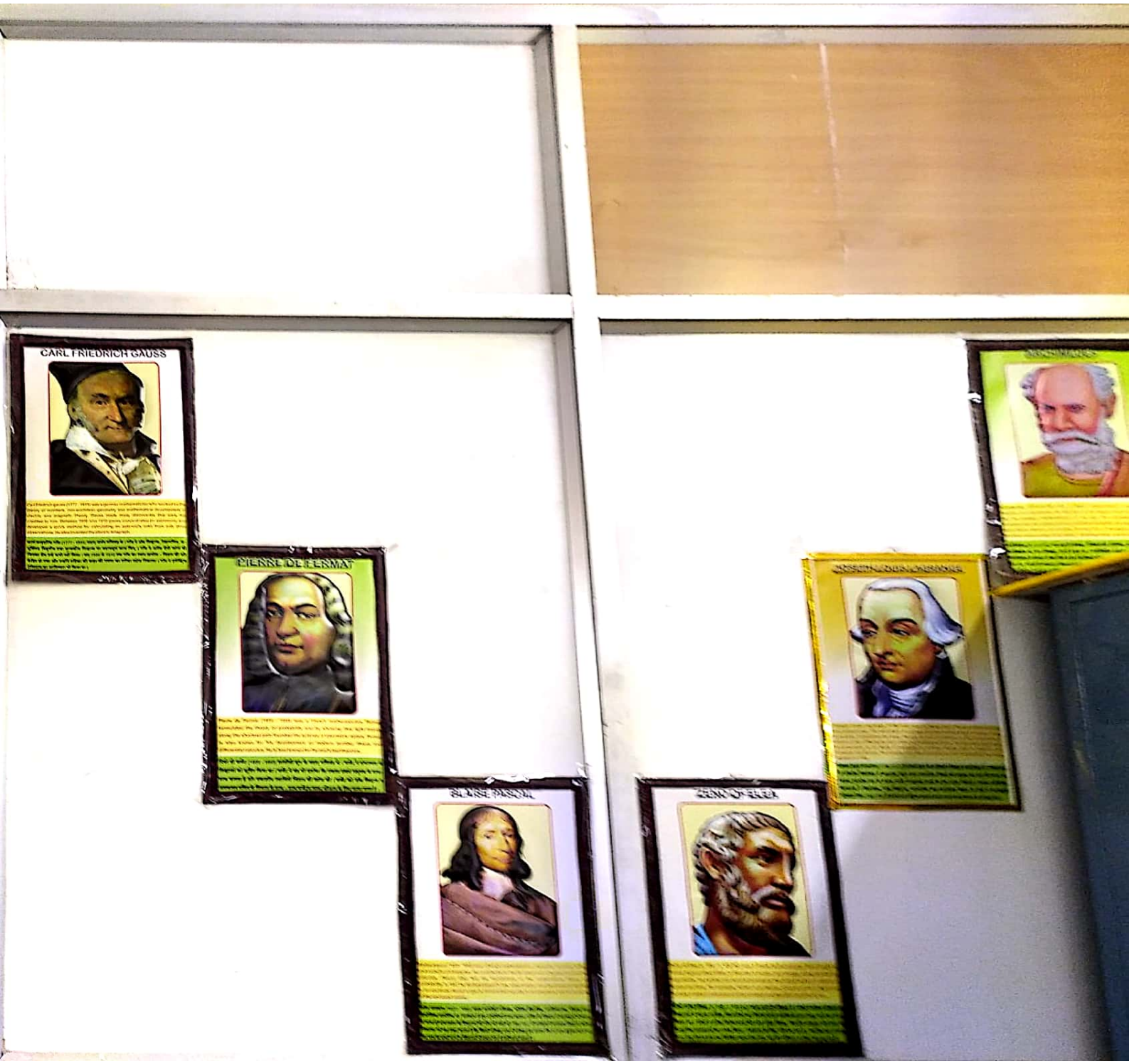
SRINIVASA RAMANUJAN

BHASKARACHARYA



Bhaskaracharya was an Indian mathematician and astronomer. He has been called the greatest mathematician of medieval India. His main work the "Siddhanta siromani" is divided into four parts. His work on calculus predates newton and leibniz by half a millennium. He was the first to give that any number divided by 0 gives infinity. He also wrote, "The hundredth part of the circumference of a circle seems to be straight. Our earth is a big sphere and that's why it appears to be flat.

ARYABHATA



A MATHS IS ALL ...ABOUT...

TEACHING OTHERS

TOOLS

EXPLAINING YOUR THOUGHTS

THINKING TO

BEING PRECISE

TESTING IDEAS

FINDING SOLUTIONS

WORKING GETHER

LOOKING FOR PATTERNS

BEING CREATIVE

UNDERSTANDING THE PROBLEMS

TRYING TO LOVE

JUSTIFYING ANSWERS

MAKING MISTAKES

IMPROVING METHODS

PREDICTING THE FUTURE

MATHEMATICS..

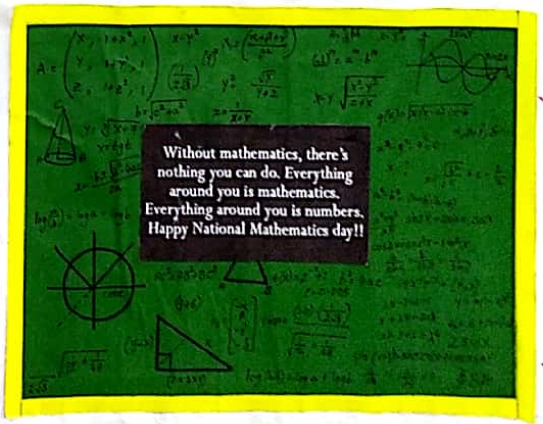
M- Miracle of Nature
A- Art of arithmetic
T- Tool of Knowledge
H- Habit of problem solving
E- Evaluation of Civilization
M- Magic of numbers
A- Application of rules
T- Tool of Knowledge
I- Ideas of intellect
C- Creativity of algebra
S- Science of learning

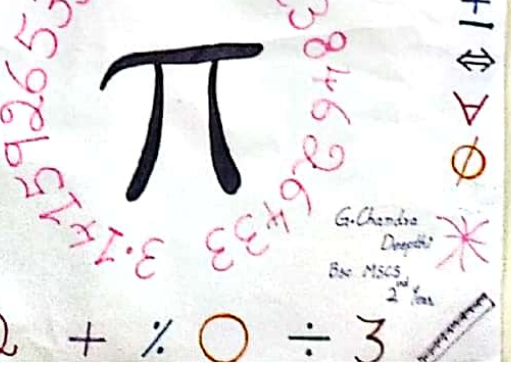
B. Goda Sridevi
BSC. MSCS
3rd year

The Man Who Knew ∞

Srinivasa Ramanujan

Srinivasa Ramanujan 22 December 1887 - 26 April 1920 was an Indian Mathematician who lived during the British rule in India. Though he had almost no formal training in pure Mathematics, he made substantial contributions to mathematical analysis, number theory, infinite series and continued fractions. Ramanujan initially developed his own mathematical research in isolation. He was mentored by G.H. Hardy in the early 1914s. After getting to know at Cambridge, Ramanujan did not have work. He compiled over 3500 identities and equations in his life. Some of the identities were found in his lost notebook. After the notebook was discovered, mathematicians proved almost all of Ramanujan's work. His discoveries have led to many advancements in mathematics. His formulas are now being used in Cryptolinguistics and string theory. In 2011, Ramanujan's birthday was made as annual National Mathematics Day by Prime Minister Manmohan Singh. His death was mainly caused by hepatic amoebiasis caused by liver infection commonly in Madras. He is known for Landau-Ramanujan constant Ramanujan-Soldner constant Ramanujan theta function Rogers-Ramanujan identities Mock theta functions Ramanujan Prime Ramanujan conjecture Ramanujan's master theorem Ramanujan-Sato series. By 1906, Ramanujan had begun to undertake deep research. He investigated the series $\sum \frac{1}{n}$ and calculated Euler's constant to 15 decimals. He began to study the Bernoulli's numbers, although this was entirely his own independent discovery. Ramanujan independently discovered results of Gauss, Kummer and others on hypergeometric series.





G. Chandra Dwarakh
BSC MSCS
2nd Year

DEPARTMENT OF MATHEMATICS

PG NOTICE

OSMANIA UNIVERSITY
HYDERABAD – 500 007

No. Jt.Cr./Stat./Acad/2022 Dated: [illegible].05.2022

To
All the Principals of Campus, Constituent & Affiliated Colleges offering M.A./ M.Sc./M.Com./ MSW/MCJ/M.Lib.I.Sc./M.P.Ed. Courses of Osmania University.

Sub: Almanac of PG Courses viz., M.A. / M.Sc. / M.Com. / MSW /MCJ/ M.Lib.I.Sc. / M.P.Ed. II & IV semesters for the academic year 2021-2022 – Approval Communicated – Reg.

Sir/Madam,

I am to communicate the approval of the University for the following Almanac for PG courses, viz., M.A./M.Sc./M.Com./MSW/MCJ/M.Lib.I.Sc./M.P.Ed. II & IV semesters for the academic year 2021-2022 :-

II & IV Semesters

1	Commencement of Classes	26.05.2022
2	Cut off date for Readmissions	26.06.2022
3	I[st] Internal Assessment	12.07.2022 & 13.07.2022
4	II[nd] Internal Assessment	05.08.2022 & 06.08.2022
5	Last Date of Instruction	12.08.2022
6	Preparatory holidays/Practical Exams	13.08.2022 to 20.08.2022
7	Commencement of Theory Exams	22.08.2022

Note: As the academic calendar was derailed due to COVID-19 pandemics. Hence, to save the academic interests of the students and to bring back the normalcy of academic years 2 hours of extra classes per day (including 2[nd] saturdays working days) should be undertaken to condense the required mandatory teaching days (i.e. 90 days) for completion of the courses.

Yours Sincerely,

DEPUTY REGISTRAR
(Academic)

Copy to:-

1. The Dean, Faculty of Arts/Commerse/Social Sciences/Science/Education, OU.
2. The Dean, Development & UGC Affairs, OU.
3. The Dean, Students Affairs, OU.
4. The Director, Directorate of Academic Audit, OU.
5. The Director, Directorate of Admissions, OU.
6. The Director, Infrastructure, OU - with a request to place this on the University Website.
7. The Director, University Foreign Relations Office, OU.
8. The Head, Department of _____ OU.
9. The Controller of Examinations, OU.
10. The Addl. Controller of Examinations, (P.G. Courses/Confidential), OU.
11. The Finance Officer, OU.
12. The Deputy Registrar, Cheque II Section, Examination Branch, OU.
13. The Secretary to Vice-Chancellor, OU.
14. The P.A. to Registrar/Officer on Special Duty to V.C., OU.

GOVERNMENT DEGREE COLLEGE FOR WOMEN (A)

DEPARTMENT OF MATHEMATICS

M. Sc (MATHEMATICS) TIME-TABLE

2022-2023

SEMESTER-III

WEEK	Period-I 10:00am-11:00am	Period-II 11:00am-12:00pm	Period-III 12:00pm-01:00pm		Period-IV 1:20pm-2:20pm	Period-V 2:20pm-3:20pm
MON	General Measure & Integration(ME)	Linear Algebra(VS)	Numerical Analysis(ME)	L	Operation Research(VS)	Functional Analysis(GP)
TUE	General Measure & Integration(ME)	Linear Algebra(VS)	Numerical Analysis(ME)	U	Operation Research(VS)	Functional Analysis(GP)
WED	General Measure & Integration(ME)	Linear Algebra(VS)	Numerical Analysis(ME)	N	Operation Research(VS)	Functional Analysis(GP)
THU	General Measure & Integration(ME)	Linear Algebra(VS)	Numerical Analysis(ME)	C	Operation Research(VS)	Functional Analysis(GP)
FRI	General Measure & Integration(ME)	Linear Algebra(VS)	Numerical Analysis(ME)	H	Operation Research(VS)	Functional Analysis(GP)
SAT	General Measure & Integration(ME)	Linear Algebra(VS)	Numerical Analysis(ME)		Operation Research(VS)	Functional Analysis(GP)

Paper M301: Functional Analysis (K.Gangaprasad)

Paper M302: General Measure & Integration (MD Efana)

Paper M303: Linear Algebra (P. Vikas Singh)

Paper M304 (A): Operation Research (P. Vikas Singh)

Paper M305 (B): Numerical Analysis (MD Efana)

Principal

GOVERNMENT DEGREE COLLEGE FOR WOMEN (A)

DEPARTMENT OF MATHEMATICS

M. Sc (MATHEMATICS) TIME-TABLE

SEMESTER-I (2022-2023), ROOM NO: 215

WEEK	Period-I 10:00am-11:00am	Period-II 11:00am-12:00pm	Period-III 12:00pm-01:00pm		Period-IV 1:20pm-2:20pm	Period-V 2:20pm-3:20pm
MON	Mathematical Analysis (VS)	Ordinary& Partial Differential Equations (ME)	Abstract algebra(GP)	L	Elementary Number Theory(DS)	Discrete Mathematics(GP)
TUE	Mathematical Analysis (VS)	Ordinary& Partial Differential Equations (ME)	Abstract algebra(GP)	U	Elementary Number Theory(DS)	Discrete Mathematics(GP)
WED	Mathematical Analysis (VS)	Ordinary& Partial Differential Equations (ME)	Abstract algebra(GP)	N	Elementary Number Theory(DS)	Discrete Mathematics(GP)
THU	Mathematical Analysis (VS)	Ordinary& Partial Differential Equations (ME)	Abstract algebra(GP)	C	Elementary Number Theory(DS)	Discrete Mathematics(GP)
FRI	Mathematical Analysis (VS)	Ordinary& Partial Differential Equations (ME)	Abstract algebra(GP)	H	Elementary Number Theory(DS)	Discrete Mathematics(GP)
SAT	Mathematical Analysis (VS)	Ordinary& Partial Differential Equations (ME)	Abstract algebra(GP)	L	Elementary Number Theory(DS)	Discrete Mathematics(GP)

Paper M101: Abstract Algebra (K.Gangaprasad)

Paper M102: Mathematical Analysis (P. Vikas Singh)

Paper M103: Ordinary&Partial Differential Equations (MD Efana)

Paper M104: Elementary Number Theory (Dr.D Sarada Devi)

Paper M105: Discrete Mathematics (K.Gangaprasad)

Principal

DEPARTMENT OF

POSTER PRESENTATION

డిగ్రీతో ఐఐటీలోకి

GOVERNMENT DEGREE COLLEGE FOR WOMEN
AUTONOMOUS, AFFILIATED TO OSMANIA UNIVERSITY, BEGUMPET, HYDERABAD
DEPARTMENT OF MATHEMATICS

CERTIFICATE

This is to certify that Ms. .....
studying in class.....with the
roll no.....has won
the.....prize in the QUIZ / ESSAY WRITING /
POSTER PRESENTATION competition conducted on the eve of
NATIONAL MATHEMATICS DAY on 22.12.2021.

Hod | The Principal | Principal

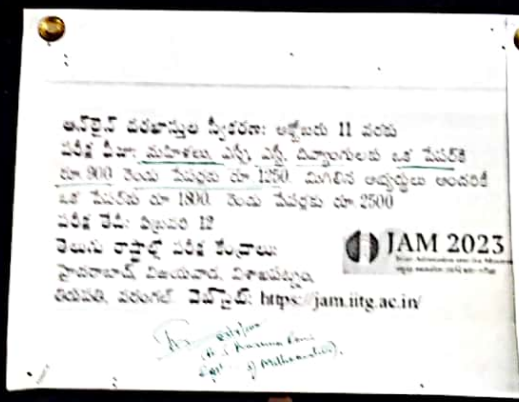
STUDENT ACHIEVEMENTS

GOVERNMENT DEGREE COLLEGE FOR WOMEN(A)
BEGUMPET,HYDERABAD.
DEPARTMENT OF MATHEMATICS
JIGNASA : 2021

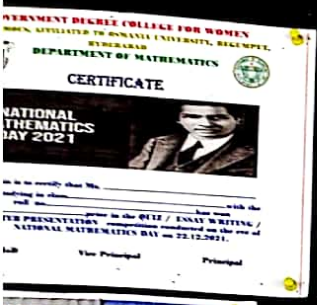
2021-22
ACTIVITY- 14

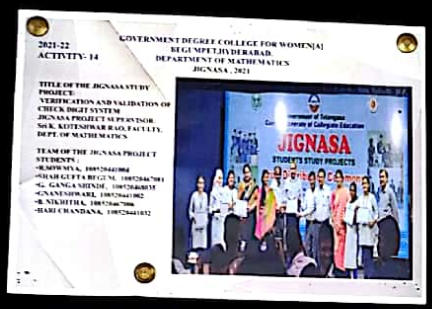
TITLE OF THE JIGNASA STUDY PROJECT:
VERIFICATION AND VALIDATION OF CHECK DIGIT SYSTEM
JIGNASA PROJECT SUPERVISOR
Sri.K. KOTESHWAR RAO, FACULTY, DEPT. OF MATHEMATICS

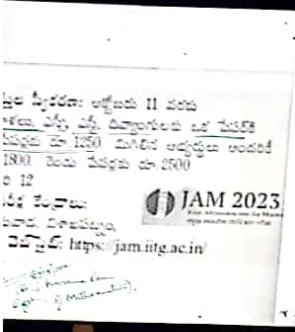
TEAM OF THE JIGNASA PROJECT STUDENTS :
-B.MOUNIYA, 1085204411004
-SHAH GUFTA BEGUM, 1085204417001
-G. GANGA SHINDE, 1085204410035
-G.NANESHWARI, 1085204411002
-B.NIKHITHA, 1085204417006
-HARICHANDANA, 1085204411032



DEPARTMENT OF MATHEMATICS



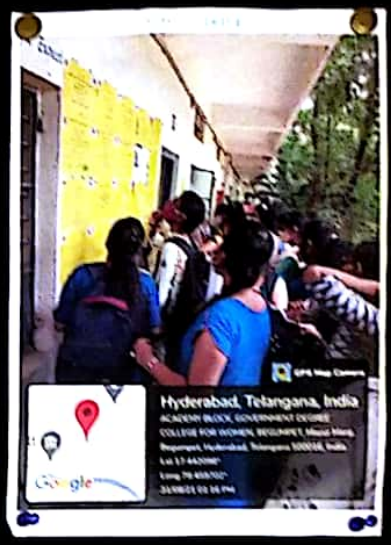




F MATHEMATICS

FIELD VISITS

WORK SHOPS



GOVERNMENT DEGREE COLLEGE FOR WOMEN
(Autonomous), Begumpet, Hyderabad-500016
In Association With
QUEST SMART LEARNING SOLUTIONS
Chikkadapally, Hyderabad-500020

Certificate of Completion

This is to certify that

Mr./Ms. .....

Student of .....

has successfully completed 'MATHEMAGIC'
Certificate Course in the academic year 2020-21

Date:

Director, Quest Smart Learning Solutions | Head of The Department | Principal, Govt. Degree College for Women

WORKSHOPS

GOVERNMENT DEGREE COLLEGE FOR WOMEN, BEGUMPET
(Autonomous, Affiliated to Osmania University) Hyderabad-500016
DEPARTMENT OF MATHEMATICS
In Association With
QUEST SMART LEARNING SOLUTIONS
Chikkadapally, Hyderabad-500020

Certificate of Completion

This is to Certify that

Mr./Ms. _____

student of _____ with Roll No. _____ has successfully completed

ONE MONTH CERTIFICATE COURSE in ORAL COMPUTATION SKILLS

during 09th December 2021 to 31st January 2022

Director, Quest Smart Learning Solutions | Head of the Department, GDCW, Begumpet | Principal, GDCW, Begumpet

CERTIFICATE COURSES

DEPARTMENT OF MATHEMATICS

Kernel of a Group Homomorphism

Let $G, \bar{G}$ be two groups and $\phi: G \to \bar{G}$ be a homomorphism.

Then, $\text{Ker}\phi = \{a \in G / \phi(a) = \bar{e}\}$

where $\bar{e}$ is the id. ele. of $\bar{G}$.

Remarks:- 1) ϕ is an isomorphism $\iff \text{Ker}\phi = \{e\}$

2) $\text{Ker}\phi$ is a normal subgroup of G

3) $\frac{G}{\text{Ker}\phi} \cong \phi(G)$

$L\{y''\} = p^2 L\{y\} - py(0) - y'(0)$

$L\{y'\} = pL(y) - y(0)$

$L^{-1}(1) = \delta(t)$, $L^{-1}\left(\frac{1}{p}\right) = 1$, $L^{-1}\left(\frac{1}{p^2}\right) = t$, $L^{-1}\left(\frac{1}{p-a}\right) = e^{at}$

DEPARTMENT OF MATHEMATICS
COURSE OUTCOMES

VIEW DOCUMENT GOVERNMENT DEGREE COLLEGE FOR WOMEN (AUTONOMOUS), BEGUMPET

DEPARTMENT OF MATHEMATICS

COURSE OUTCOMES (COs)

BSc FIRST YEAR

SEM I DIFFERENTIAL AND INTEGRAL CALCULUS

COURSE OUTCOMES (COs):

After completion of this course, the student will be able to

CO1: Gain an understanding of partial differentiation Equations.

CO2: Deliberate in depth functions of two variables.

CO3: Verify whether a given function is continuous or not at a given point by an understanding of the neighborhood of a point in (a, b).

CO4: Find the limit of a function of two variables.

CO5: Apply and solve homogeneous functions.

CO 6: Differentiate composite functions and implicit functions.

CO7: Compute radius of curvature and length of arc as a function.

CO 8: Determine the area of the surface of the frustum of a cone.

GOVERNMENT DEGREE COLLEGE FOR WOMEN (AUTONOMOUS), BEGUMPET

DEPARTMENT OF MATHEMATICS

COURSE OUTCOMES (COs)

BSc FIRST YEAR

SEM II DIFFERENTIAL EQUATIONS

COURSE OUTCOMES (COs):

After completion of this course, the student will be able to

CO1: Gain the complete understanding of linear differential equations of first order and first degree.

CO2: Deliberate in depth differential equations of first order and first degree.

CO3: Verify whether a given differential equation is exact or not.

CO4: Identify the appropriate integrating factors to make a non-exact differential equation to exact.

CO5: Apply and solve first order differential equations

CO6: Equipped with the various tools to solve few types of differential equations that arise in several branches of science.

GOVERNMENT DEGREE COLLEGE FOR WOMEN (AUTONOMOUS), BEGUMPET

DEPARTMENT OF MATHEMATICS

COURSE OUTCOMES (COs)

BSc SECOND YEAR

SEM III REAL ANALYSIS

COURSE OUTCOMES:

After the completion of the course students will be in a position to

CO 1: Appreciate beauty and applicability of the course.

CO 2: Deliberate in details real number systems

CO 3: Give examples of sequences and series.

CO 4: Understand the underlying vital basic concepts of real analysis such as epsilon-delta definition of limit of a sequence and convergence of a sequence.

CO 5: Determine the continuity and uniform continuity of a function at a point.

CO 6: Compute limits of given functions

CO 7: Explain the properties of continuous functions

CO 8: Prove and apply the mean value theorems

CO 9: Elaborate the geometrical representations of mean value theorems

CO 10: Apply Taylor's and Maclaurin's theorems

CO 11: Differentiate the Darboux and Riemann integrals

CO 12: Gain the significance of the Fundamental theorem of Integral calculus to integration.

GOVERNMENT DEGREE COLLEGE FOR WOMEN (AUTONOMOUS), BEGUMPET

DEPARTMENT OF MATHEMATICS

COURSE OUTCOMES (COs)

BSc SECOND YEAR

SEC-II THEORY OF EQUATIONS

After the completion of the course students will be in a position to

CO 1: Appreciate beauty and applicability of the course.

CO 2: Deliberate in details of theory of equations.

CO 3: Compute maxima and minima values of polynomials.

CO 4: Determine the number of roots of an equation.

CO 5: Use Descartes' Rule of signs for positive and negative roots.

CO 6: Establish relation between the roots and coefficients of a given polynomial.

CO 7: Apply the theorem on relation between the roots and coefficients of a given polynomial.

CO 8: Evaluate the cube roots unity.

CO 9: Give examples of roots of symmetric functions.

SEC-II LOGIC AND SETS

After the completion of the course students will be in a position to

CO 1: Appreciate beauty and applicability of the course.

CO 2: Deliberate in details of Logic and Sets, Identify Laws of Logic, Draw Venn diagrams.

CO 3: Use axioms of probability, Establish the basic connectives and truth tables.

CO 4: Apply the Quantifiers, Evaluate the cube roots unity, Give examples of Discrete Random variables.

GOVERNMENT DEGREE COLLEGE FOR WOMEN (AUTONOMOUS), BEGUMPET

DEPARTMENT OF MATHEMATICS

COURSE OUTCOMES (COs)

BSc FINAL YEAR

SEC-IV NUMBER THEORY

COURSE OUTCOMES:

After the completion of the course students will be in a position to

CO 1: Appreciate beauty and applicability of the course. Deliberate in details of Number theory. Prove the Goldbach conjecture.

CO 2: Explain the properties of congruences. Write binary and decimal representations of integers.

CO 3: Establish the number theoretic functions. Apply Euler's generalization of Fermat's theorem. Use Euler's Phi function. Give examples of Sum and Number of Divisors.

SEC-IV VECTOR CALCULUS

COURSE OUTCOMES:

After the completion of the course students will be in a position to

CO 1: Establish the work done against a force and evaluate line integrals.

CO 2: Write binary and decimal representations of integers. Determine conservative vector fields.

CO 3: Find surface integrals. Understand the concepts of gradient, divergence, curl and establish relations among them. Compute volume integrals. Apply Taylor's series.

CO 4: Use gradient of a scalar field. Write binary and decimal representations of integers. Determine conservative fields and potentials.

GOVERNMENT DEGREE COLLEGE FOR WOMEN (AUTONOMOUS), BEGUMPET

DEPARTMENT OF MATHEMATICS

COURSE OUTCOMES (COs)

BSc FINAL YEAR

GENERIC ELECTIVE BASIC MATHEMATICS

COURSE OUTCOMES:

After the completion of the course students will be in a position to

CO 1: Realize how quantitative analysis will be an aid in the decision-making process.

CO 2: Understand how the quantitative analysis can be linked with other information in making decisions.

CO 3: Apply the concepts of matrices and determinants.

CO 4: Evaluate rank, adjoint and find solutions of systems of linear equations.

SEM VI: STUDY PROJECT / PAPER - MATHEMATICAL MODELING

The focus is on those mathematical techniques that are applicable to models involving differential equations, and which describe rates of change. Students realize some beautiful problems can be modeled by using differential equations. The students also learn how to use the mathematical techniques in solving differential equations.

CO1: The focus is on those mathematical techniques that are applicable to models involving differential equations, and which describe rates of change.Realize how Mathematical Modeling helps for decision making

CO 2: Realize how Mathematical Modeling helps for decision making.

CO 3: Understand Exponential decay and radioactivity.

CO 4: Apply the concept of Exponential growth – Density dependent growth – Limited growth with harvesting. Interacting Population Models.

CO 5: Evaluate Radiative heat conduction - Diffusion.

CO 6: Solve Boundary Value Problems.

GOVERNMENT DEGREE COLLEGE FOR WOMEN (AUTONOMOUS), BEGUMPET

DEPARTMENT OF MATHEMATICS

COURSE OUTCOMES (COs)

BSc SECOND YEAR

SEM IV ALGEBRA

COURSE OUTCOMES:

On successful completion of the course students will be able to

CO1: Recognize algebraic structures that arise in matrix algebra, linear algebra.

CO 2: Apply the skills learnt in understanding various such subjects.

CO 3: Give examples of various groups and subgroups under various binary operations.

CO 4: Find order of a group and order of an element.

CO 5: Identify generators of cyclic groups.

CO 6: Construct Cayley's composition table for various groups including dihedral groups.

CO 7: Verify Lagrange's theorem, find index and verify group axioms for Factor groups.

CO 8: Apply concepts of bijective functions in Permutation groups, Homomorphism, Isomorphism and Automorphism.

CO 9: Determine the zero divisors, nilpotent, idempotent and units of rings.

CO 10: Application of cosets in the Rotation group of a cube and Soccer ball.

CO 11: Understand the basic concepts of ideals like prime ideal, principal ideal, maximal ideal and relation to integral domains, fields.

CO 12: Compute the Characteristic of given rings

CO 13: Establish the ring homomorphism, isomorphism and first isomorphism theorem.

GOVERNMENT DEGREE COLLEGE FOR WOMEN (AUTONOMOUS), BEGUMPET

DEPARTMENT OF MATHEMATICS

COURSE OUTCOMES (COs)

BSc FINAL YEAR

SEM V LINEAR ALGEBRA

COURSE OUTCOMES:

After the completion of the course students will be in a position to

CO 1: Appreciate beauty and applicability of the course.

CO 2: Deliberate in detailed vector spaces.

CO 3: Give examples of vector spaces and subspaces.

CO 4: Understand the underlying vital basic concepts of vector space such as pivot columns and pivot positions

CO 5: Determine the dimensions of Null space, Row space and Column space of a given matrix.

CO 6: Compute Ranks of Null space, Row space and Column space of a given matrix.

CO 7: Evaluate the Eigenvalues and Eigenvectors

CO 8: Prove and apply the concepts of Eigenvalues and Eigenvectors in other areas of mathematics.

CO 9: Establish the complex eigenvalues and eigenvectors.

CO 10: Apply Linear algebra concepts to differential equations.

CO 11: Write the characteristic equation for a given matrix.

CO 12: Differentiate between Linear dependence and linear independence of sets.

GOVERNMENT DEGREE COLLEGE FOR WOMEN (AUTONOMOUS), BEGUMPET

DEPARTMENT OF MATHEMATICS

COURSE OUTCOMES (COs)

BSc FINAL YEAR

SEM VI- A INTEGRAL TRANSFORMS

COURSE OUTCOMES:

After the completion of the course students will be in a position to

CO 1: Appreciate beauty and applicability of the course.

CO 2: Apply their knowledge to solve some problems on special functions and Differential Equations by using the Integral Transforms.

CO 3: Evaluate the Inverse Transformations.

CO 4: Understand and apply the Convolution theorem - Heaviside's expansion formula.

CO 5: Determine the solutions of simultaneous ordinary differential equations

CO 6: Apply Integral Transforms concepts to Partial differential equations.

CO 7: Write Fourier Transforms- Sine and cosine transforms.

CO 8: Compute Inverse Fourier Transforms.

SEM VI – B ANALYTICAL SOLID GEOMETRY

COURSE OUTCOMES:

CO1: Students understand the beautiful interplay between algebra and geometry.

CO 2: Apply their knowledge to solve some problems on Circle, intersection of a Sphere and a Line.

CO 3: Write equation of a Tangent Plane. Evaluate angle of intersection of Two Spheres.

CO 4: Find a Radical Plane.

CO 5: Understand and apply the concepts of Cone.

DEPARTMENT OF MATHEMATICS

LOGICAL REASONING QUESTIONS OF THE DAY

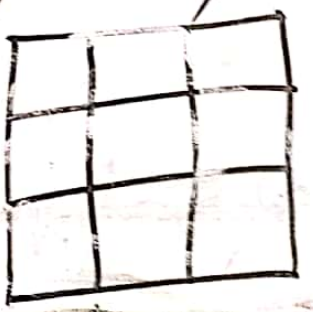
→ What comes next?

6, 12, 20, 30, 42, 56, ?

→ Odd one out?

−5, −2, 3, 10, 19, 29, 41, 58

→ How many squares are there?



DEPARTMENT OF MATHEMATICS

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