M. G. Vidyamandir's
S.P.H. Arts, Science and Commerce College, Nampur
Department of Mathematics
Standard Operating Procedures (A.Y. 2021-2022)

Department: Mathematics

- **Faculty in the Department:** The Department of Mathematics has one faculty member.

Sr. No.	Name of the Faculty	Educational Qualification	Experience in Yrs.	Nature of work
1.	Prof. R. A. Pawar	M.Sc.	35	Head (Associate Professor)

1. **Purpose of the Department:**

- To provide students with knowledge and insight in mathematics so that they can work as mathematical professionals.
- To apply arithmetic, algebraic, geometric, higher order thinking and statistical method to modelling and solving real-world situations
- To represent and evaluate basic mathematical information verbally, numerically, graphically and symbolically.
- To train the students to deal with problems faced by industry through the knowledge of mathematics and scientific computational techniques.
- To provide students with knowledge and capability in formulating and analysis of mathematical models in real-life applications.
- To introduce the fundamentals of mathematics to students and strengthen the students' logical and analytical abilities.

2. **Roles and Responsibilities:**

Prof. R. A. Pawar observes the department's overall work and ensures that teaching in the department is contemporary and innovative. Also, calculate and distribute the workload as per the departmental timetable for smooth functioning. With the kind consent of her associates, various responsibilities are shared amongst all the faculty members of the

department in addition to teaching and evaluation work. She coordinates the work of the department through well-planned and regular meetings.

3. **Resources and Materials:**

   The department has a computer with an internet facility. The dead stock of the available infrastructure (instruments/equipment/furniture etc.) has been maintained and cross-verified every year by the committee appointed by the college. Purchase and supply of the same is executed at the management level as per the demand from the department through the college administration.

4. Terminology abbreviation:

- adj – adjugate of a matrix.
- a.e. – almost everywhere.
- Alt – alternating group
- A.M. – arithmetic mean..
- arg – argument of[2]
- a.s. – almost surely.
- A.P. – arithmetic progression.
- c.c. – complex conjugate.
- char – characteristic of a ring.
- Cor – corollary.
- corr – correlation.
- cos – cosine function.
- cosec – cosecant function. (*Also written as* csc.)
- cosech – hyperbolic cosecant function. (*Also written as* csch.)
- cosh – hyperbolic cosine function.
- cot – cotangent function. (*Also written as* ctg.)
- crd – chord function.
- curl – curl of a vector field. (*Also written as* rot.)
- def – define or definition.
- deg – degree of a polynomial,
- del – del, a differential operator.
- det _ determinant of a matrix or linear transformation.
- dim – dimension of a vector space.
- div – divergence of a vector field.
- Eqn – equation.
- exp – exponential function. (exp *x is also written as* e^x.)
- ext – exterior.
- gcd – greatest common divisor of two numbers. (*Also written as* hcf.).
- G.M. – geometric mean.
- glb – greatest lower bound. (*Also written as* inf.)

- G.P. – geometric progression.
- grad – gradient of a function.
- hcf – highest common factor of two numbers. (*Also written as* gcd.)
- H.M. – harmonic mean.

- Im – imaginary part of a complex number[2] (*Also written as*).
- inf – infimum of a set. (*Also written as* glb.)
- int – interior.
- ker – kernel.
- lcm – lowest common multiple or least common multiple of two numbers..
- lim – limit of a sequence, or of a function.
- lim inf – limit inferior.
- lim sup – limit superior.
- log – logarithm. (*If without a subscript, this may mean either* $\log_{10}$ *or* $\log_e$.).
- lub – least upper bound.[1] (*Also written* sup.)
- max – maximum of a set.
- M.I. – mathematical induction.
- min – minimum of a set.
- mod – modulo..
- No. – number.
- pdf – probability density function.
- pf – proof.
- ran – range of a function.
- rank – rank of a matrix. (*Also written as* rk.)
- Re – real part of a complex number
- resp – respectively.
- sec – secant function.
- sech – hyperbolic secant function..
- sgn – sign function.
- sin – sine function.
- sinc – sinc function.
- sinh – hyperbolic sine function..
- s.t. – such that *or* so that *or* subject to.
- sup – supremum of a set.[1] (*Also written as* lub*, which stands for least upper bound.*)
- Sym – symmetric group (Sym(*n*) *is also written as* S_n) or symmetric algebra.
- tan – tangent function. (*Also written as* tgn, tg.)
- Thm – theorem.
- Tr – trace, either the field trace, or the trace of a matrix or linear transformation.
- v – volume.

5. **Co-Curricular Activities:** Planning and organizing various activities viz National Mathematics day, Avishkar Competition , MTTS, Debate Competition.