

B.Sc.(H) Mathematics Paper under Choice Based Credit System (CBCS) :

| Semester | Papers | |
|--------------|----------------------|--|
| Semester I | AECC-1 | AECC-1 : Environmental Science |
| | Core Paper -1 | Calculus (Including Practicals) |
| | Core Paper- 2 | Algebra |
| | *Generic Elective -1 | Chemistry Department : Atomic Structure, Bonding, General Org Chemistry & Aliphatic Hydrocarbons + Lab Physics Department : Electricity and Magnetism + Lab |
| Semester II | AECC-2 | English / Hindi/ Sanskrit Communications |
| | Core Paper-3 | Real Analysis |
| | Core Paper-4 | Differential Equations (Including Practicals) |
| | *Generic Elective-2 | Chemistry Department : Chemical Energetics, Equilibria & Functional Group Organic Chemistry-I + Lab Physics Department : Mechanics + Lab |
| Semester III | Core Paper 5 | Theory of Real functions |
| | Core Paper 6 | Group Theory-I |
| | Core Paper 7 | Multivariate Calculus (Including Practicals) |
| | SEC-1 | LaTeX and HTML |
| | *Generic Elective -3 | Chemistry Department : Solutions, Phase Equilibrium, Conductance, Electrochemistry & Functional Group Organic Chemistry-II + Lab Physics Department : Waves and Optics+ Lab |
| Semester IV | Core Paper 8 | Partial Differential Equations (Including Practicals) |
| | Core Paper 9 | Riemann Integration & Series of functions |
| | Core Paper 10 | Ring Theory & Linear Algebra-I |
| | SEC-2 | Computer Algebra Systems and Related Softwares |
| | *Generic Elective -4 | Chemistry Department : Chemistry of s- and p-block elements, States of matter and Chemical Kinetics + Lab Physics Department : Thermal Physics + Lab |
| Semester V | Core Paper 11 | Metric Spaces |
| | Core Paper 12 | Group Theory-II |
| | DSE-1 | C++ Programming |
| | DSE-2 | Cryptography and Network Security |
| Semester VI | Core Paper 13 | Complex Analysis (Including Practicals) |
| | Core Paper 14 | Ring Theory and Linear Algebra-II |
| | DSE-3 | Probability theory & Statistics |
| | DSE-4 | Linear Programming and Theory of Games |

AECC- Ability Enhancement Compulsory Course, **GE-** Generic Elective (Interdisciplinary) , **DSE-** Discipline Specific Elective, **SEC-** Skill Enhancement Course.

* - Student may opt only one paper as **Generic Elective** papers out of two options, Students from arts background may opt Generic Elective papers from BA(H) Generic papers.

GE-1

| Sr. No | Department | Student may opt only one Generic Elective (Interdisciplinary Paper) from the following |
|--------|-------------|---|
| 1 | Commerce | Insurance & Risk Management |
| 2 | Economics | Introductory Microeconomics |
| 3 | English | Contemporary India: Women and Empowerment |
| 4 | Hindi | हिंदी सिनेमा और उसका अध्ययन |
| 5 | History | Delhi Through Ages OR History of Science and Technology |
| 6 | Mathematics | Calculus |
| 7 | Political | |
| 8 | Sanskrit | Basic Sanskrit |

GE-2

| Sr. No | Department | Student may opt only one Generic Elective (Interdisciplinary Paper) from the following |
|--------|-------------|---|
| 1 | Commerce | Investing in Stock Markets |
| 2 | Economics | Introductory Macroeconomics |
| 3 | English | Language, Literature and Culture |
| 4 | Hindi | रचनात्मक लेखन |
| 5 | History | Cultural Diversity in India OR Issues in the Contemporary World: 1945-2000 |
| 6 | Mathematics | Linear Algebra |
| 7 | Political | |
| 8 | Sanskrit | Indian Culture and Social Issues |

GE-3

| Sr. No | Department | Student may opt only one Generic Elective (Interdisciplinary Paper) from the following |
|--------|-------------|---|
| 1 | Commerce | Project Management |
| 2 | Economics | Indian Economy-I |
| 3 | English | Academic Writing |
| 4 | Hindi | भाषा और समाज |
| 5 | History | The Making of Contemporary India OR Perspectives on Environmental History |
| 6 | Mathematics | Differential Equations |
| 7 | Political | |
| 8 | Sanskrit | Sanskrit and Other Modern Indian Languages |

GE-4

| Sr. No | Department | Student may opt only one Generic Elective (Interdisciplinary Paper) from the following |
|--------|------------|---|
| 1 | Commerce | Economics of Regulation of Domestic & Foreign Exchange Markets |
| 2 | Economics | Indian Economy-II |
| 3 | English | Media & Communication |

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|---|-------------|---|
| 4 | Hindi | हिंदी का वैश्विक परिदृश्य |
| 5 | History | Inequality and Differences OR Religion and Religiosity |
| 6 | Mathematics | Numerical Methods |
| 7 | Political | |
| 8 | Sanskrit | Basic Principles of Indian Medicine System (Ayurveda) |