



# NGSE Syllabus SCIENCE & COMMERCE NATIONAL GENIUS SEARCH EXAMINATION® Go beyond the Olympiads!

# 12

**Important Note:** NGSE Mains will have questions related to the following concepts / topics. NGSE Advanced will include all the topics you have studied in the earlier classes, apart from the following. Students can opt for any two subjects for NGSE from Physics, Chemistry, Mathematics, Biology, Economics, Business Studies and Accountancy. (i.e., Students can even choose interdisciplinary subjects). The NGSE question booklet consists of questions from all the subjects and students need to opt for their choice of subjects at the time of examination only.

| Sr. No | <b>Mathematics:</b> Daily life applications and understanding of the following : |
|--------|--|
| 1.     | Relations and Functions  |
| 2.     | Inverse Trigonometric Functions  |
| 3.     | Matrices   |
| 4.     | Determinants   |
| 5.     | Continuity and Differentiability   |
| 6.     | Application of Derivatives   |
| 7.     | Integrals and Application of Integrals   |
| 8.     | Differential Equations   |
| 9.     | Vector Algebra   |
| 10.    | Three Dimensional Geometry   |
| 11.    | Linear Programming   |
| 12.    | Probability  |
|        |  |
|        |  |

| Sr. No | <b>Physics:</b> Daily life applications and understanding of the following : |
|--------|--|
| 1.     | Electric Charges and Fields  |
| 2.     | Electrostatic Potential & Capacitance  |
| 3.     | Current Electricity  |
| 4.     | Moving Charges and Magnetism   |
| 5.     | Magnetism and Matter   |
| 6.     | Electromagnetic Induction  |
| 7.     | Alternating Current  |
| 8.     | Electromagnetic waves  |
| 9.     | Ray Optics and Optical Instruments   |
| 10.    | Wave Optics  |
| 11.    | Dual Nature of Radiation and Matter  |
| 12.    | Atoms and Nuclei   |
| 13.    | Semiconductor Electronics  |
| 14.    | Communication System   |

| Sr. No | <b>Chemistry:</b> Daily life applications and understanding of the following : |
|--------|--|
| 1.     | Solid State  |
| 2.     | Solutions  |
| 3.     | Electrochemistry   |
| 4.     | Chemical Kinetics  |
| 5.     | Surface Chemistry  |
| 6.     | General Principles and Processes of Isolation of Elements                      |
| 7.     | The p-Block elements   |
| 8.     | The d-and f-Block Elements   |
| 9.     | Coordination Compounds   |
| 10.    | Haloalkanes and Haloarenes   |
| 11.    | Alcohols, Phenols and Ethers   |
| 12.    | Aldehydes, Ketones & Carboxylic Acids  |
| 13.    | Amines   |
| 14.    | Biomolecules   |
| 15.    | Polymers   |
| 16.    | Chemistry in Everyday Life   |

| Sr. No | <b>Biology:</b> Daily life applications and understanding of the following : |
|--------|--|
| 1.     | Reproduction in Organisms  |
| 2.     | Sexual Reproduction in Flowering Plants                                      |
| 3.     | Human Reproduction   |
| 4.     | Reproductive Health  |
| 5.     | Principle of Inheritance and Variation                                       |
| 6.     | Molecular Basis of Inheritance   |
| 7.     | Evolution  |
| 8.     | Human Health and Diseases  |
| 9.     | Strategies for Enhancement in Food Production                                |
| 10.    | Microbes in Human Welfare  |
| 11.    | Biotechnology: Principles & Processes  |
| 12.    | Biotechnology and its Applications   |
| 13.    | Organisms and Populations  |
| 14.    | Ecosystem  |
| 15.    | Biodiversity and Conservation  |
| 16.    | Environmental Issues   |

|        |  |
|--------|--|
| Sr. No | <b>Economics:</b> Daily life applications and understanding of the following :           |
|        | <b>Microeconomics</b>  |
| 1.     | Introduction   |
| 2.     | Consumer's Equilibrium and Demand  |
| 3.     | Producer Behavior and Supply   |
| 4.     | Forms of Market - Price Determination under perfect competition with simple applications |
|        | <b>Macroeconomics</b>  |
| 5.     | National Income & related Aggregates   |
| 6.     | Money and Banking  |
| 7.     | Determination of Income and Employment   |
| 8.     | Government Budget and the Economy  |
| 9.     | Balance of Payments  |

|        |   |
|--------|---|
| Sr. No | <b>Business Studies:</b> Daily life applications and understanding of the following : |
| 1.     | Nature and Significance of Management   |
| 2.     | Principles of Management  |
| 3.     | Business Environment  |
| 4.     | Planning  |
| 5.     | Organising  |
| 6.     | Staffing  |
| 7.     | Directing   |
| 8.     | Controlling   |
| 9.     | Financial Management  |
| 10.    | Financial Markets   |
| 11.    | Marketing   |
| 12.    | Consumer Protection   |
| 13.    | Entrepreneurship Development  |

|        |  |
|--------|--|
| Sr. No | <b>Accountancy:</b> Daily life applications and understanding of the following : |
|        | <b>Part - I</b>  |
| 1.     | Accounting for Not-for-Profit Organisation                                       |
| 2.     | Accounting for Partnership: Basic Concepts                                       |
| 3.     | Reconstitution of a Partnership Firm-Admission of a Partner                      |
| 4.     | Reconstitution of a Partnership Firm-Retirement/Death of a Partner               |
| 5.     | Dissolution of Partnership Firm  |
|        | <b>Part - II</b>   |
| 6.     | Accounting for Share Capital   |
| 7.     | Issue & Redemption of Debentures   |
| 8.     | Financial Statements of a Company  |
| 9.     | Analysis of Financial Statements   |
| 10.    | Accounting Ratios  |
| 11.    | Cash Flow Statement  |

[www.ngsfindia.org](http://www.ngsfindia.org)

