

# City Montessori School, Lucknow

## Syllabus 2008-2009

### Class XII

S. No.	Subject	Page Number
1.	Moral Education	6
2.	English Language	6
3.	English (Prescribed Texts)	7
4.	Hindi	9
5.	History	11
6.	Psychology	12
7.	Economics	13
8.	Commerce	14
9.	Accounts	15
10.	Mathematics	16
11.	Physics	18
12.	Chemistry	21
13.	Biology	22
14.	Computer Science	25
15.	Business Mathematics	26
16.	Geography	28
17.	Biotechnology	30
18.	Environmental Education	31

**NOTE: Please refer to ISC Council Syllabus and Scope of Syllabus 2009 for further reference.**

## AIMS AND OBJECTIVES

### MORAL EDUCATION:

1. To develop in every student the essential elements of morality.
2. To develop the values and capabilities necessary for making right decisions and upright conduct.
3. To develop in them the attitude of open mindedness, to appreciate and be ready to accept others and to act constructively not defensively.
4. To develop the skill of striving not only for good but to handle the conflicting situations without demeaning self and others.
5. To develop the ability to monitor themselves and find out constructive ways of conflict resolutions.
6. To promote the development of good character for the purpose of lessening crime and raising the standard of good citizenship.

### ENGLISH LANGUAGE:

1. To develop habits of:
  - a. clear articulate expression, using accepted syntactical forms and structures with a firm grasp of idioms;
  - b. critical thinking, involving assessment and analysis of the written material provided.
2. To develop the capacity to critically and innovatively examine and to assess the value of passages of argumentative writing, to consider the assumptions upon which the arguments rest and to trace the implications that follow.
3. To develop adequate and appropriate vocabulary.
4. To develop the ability to comprehend and appreciate good prose.

### ENGLISH (Prescribed Texts):

1. To develop an appreciation of literature through a critical study of selected literary works.
2. To help students achieve through the study of literature, an understanding of the study of man.
3. To create an interest in the warp of thought, which differs from that of the group to which, the student belongs.
4. To develop the power of expression.

### HINDI:

1. To develop habits of clear articulate expression using accepted syntactical forms and structures, with a firm grasp of idiom and to comprehend and appreciate good prose.
2. To expose candidates to a deeper knowledge and appreciation of literary works in the language.

### HISTORY:

1. To provide accurate knowledge of the most significant events and personalities of the period under study in sequence and in context.
2. To familiarise candidates with factual evidence.
3. To develop an understanding of the existence of problems and relevance of evidence of explanations.
4. To develop the capacity to marshal facts and evaluate evidence and to discuss issues from a historical point of view.
5. To develop the capacity to read historical views in the light of new evidence or new interpretation of evidence.

6. To foster a sense of historical continuity.
7. To familiarise candidates with various types of historical evidence and to provide some awareness of the problems involved in evaluating different kind of source materials.

**PSYCHOLOGY:**

1. To develop an understanding of human behaviour: the nature of individuals and of members of social groups.
2. To develop an understanding of the methods of research and study employed in psychology.
3. To develop an appreciation of the practical value of psychology and its applications in daily life.

**ECONOMICS:**

1. To enable candidates to acquire knowledge, information and develop an understanding of facts, terms, concepts, conventions, trends, principles, generalisations, assumptions, hypothesis, problems, processes etc. in economics.
2. To acquaint candidates with tools of economic analysis.
3. To develop an understanding of important economic problems.
4. To acquaint candidates with the main institutions through which the productive process is carried out.
5. To develop an understanding of the role of institutions in the functioning of an economy.
6. To enable candidates to compare their own economic structure with that of the other areas of the world.

**COMMERCE:**

1. To develop an interest in the theory and practice of business, trade and industry.
2. To familiarise candidates with theoretical foundations, organising, managing and handling operations of a business firm.
3. To provide a study of the more important aspects of the commercial world.
4. To provide knowledge of the activities of commerce in the marketing of goods and services.

**ACCOUNTS:**

1. To provide an understanding of the principles of accounts and practice in recording transactions and interpreting individual as well as company accounts.
2. To develop an understanding of the form and classification of financial statements as a means of communicating financial information.

**MATHEMATICS:**

1. To enable candidates to acquire knowledge and to develop an understanding of the terms, concepts, symbols, definitions, principles, processes and formulae of mathematics.
2. To develop the ability to apply the knowledge and understanding of mathematics to unfamiliar situations or to new problems.
3. To develop skills of –
  - a. computation
  - b. drawing geometrical figures and graphs
  - c. reading tables, charts, graphs, etc.
4. To develop an appreciation of the role of mathematics in day-to-day life.
5. To develop an interest in mathematics.
6. To develop a scientific attitude through the study of mathematics.

**PHYSICS:**

1. To enable candidates to acquire knowledge and to develop an understanding of the terms, facts, concepts, definitions, fundamental laws, principles and processes in the field of physics.
2. To develop the ability to apply the knowledge and understanding of physics to unfamiliar situations.
3. To develop a scientific attitude.
4. To develop skills in –
  - a. the practical aspects of handling apparatus, recording observations and
  - b. Drawing diagrams, graphs etc.
5. To develop an appreciation of the contribution of physics towards scientific and technological developments and towards human happiness.

**CHEMISTRY:**

1. To foster acquisition of knowledge and understanding of terms concepts, fact, processes and principles.
2. To develop the ability to apply the knowledge of contents and principles of chemistry in unfamiliar situations.
3. To develop skills in proper handling of chemicals and apparatus.
4. To develop and ability to appreciate achievements and its role in nature and society.
5. To develop an interest in activities involving the usage of the knowledge of chemistry.

**BIOLOGY:**

1. To enable candidates to acquire the knowledge and to develop an understanding of biological terms, concepts, facts, formulae, etc.
2. To create awareness about the problems of the environment and the manner in which these problems can be overcome.

3. To develop the ability to appreciate biological phenomena in nature and the contribution of biology to human welfare.
4. To develop interest in plants and animals and their respective environments.
5. To develop scientific attitude towards scientific phenomena.
6. To create awareness of the fundamentals of human biology, food, health, nutrition and population control.

**COMPUTER SCIENCE:**

1. To enable students to comprehend basic concepts and practices for problem solving.
2. To develop an understanding of how computers store and process data.
3. To develop the ability to describe the major components of computer hardware and their functions and interactions.
4. To develop the ability to analyse applications and systems of interacting objects.
5. To develop the ability to code, test, debug, document and validate programs to implement various algorithms.
6. To develop an appreciation of the implications of computer use in everyday life in contemporary society.

**BIOTECHNOLOGY:**

1. To enable candidates to acquire the knowledge and develop an understanding of how materials are provided by biological agents to provide goods and services.
2. To appreciate the role played by biotechnology in improving health care of human beings.
3. To understand the interdisciplinary nature of this subject.
4. To create awareness about the appreciation of biological processes to industries.
5. To develop the ability to appreciate biological phenomenon in nature and the contribution of biotechnology to human welfare.
6. To develop scientific attitude towards biological phenomenon.

**ENVIRONMENTAL EDUCATION:**

- 1 To develop an in-depth understanding of various environmental issues and concerns of national and global importance.
- 2 To develop a balanced view of the relationship between environment and development.
- 3 To understand basic concepts related to sustainable development vis-a-vis improvement of quality of life.
- 4 To develop a deeper concern for the environment and the sense of commitment and responsibility to take proactive action.
- 5 To appreciate the variety in living organisms and recognise India as a mega-diversity nation.
- 6 To appreciate the role of the individual, community, national and international agencies in resolving environmental problems.

**MORAL EDUCATION**

**Name of the Textbook: Student’s Handbook for Spiritual Education**

**Publisher: CMS Publication**

Suggested Month	Chapter Number	Name of the Chapter
July / September	Section: C	Exercising one’s initiative in a disciplined and creative way.
Note: All written work to be done in the prescribed book only.		

**ENGLISH LANGUAGE**

**Note: English Language test papers to be prescribed by the subject teachers at the branch level.**

Question No.	Topics
<b>1.</b>	<b>Composition:</b>
<b>a</b>	narrative
<b>b</b>	descriptive
<b>c</b>	reflective
<b>d</b>	abstract / exposition
<b>e</b>	argumentative
<b>f</b>	story writing
<b>2.</b>	<b>Report Writing:</b>
	- an accident
	- a natural calamity
	- coverage of an official function
	- visit of a dignitary
	- an article
	- an incident
	- F.I.R.
	- any other topic
	<b>Review writing on:</b>
	- a film
	- a book
	- a testimonial
	- curriculum vitae
	- any other topic

<b>3.</b>	<b>Functional Grammar:</b>
<b>a</b>	transformation of sentences
<b>b</b>	prepositions
<b>c</b>	tenses
<b>4.</b>	<b>Comprehension:</b>
<b>a (i)</b>	similar meaning sentences
<b>(ii)</b>	different meaning sentences
<b>(iii)</b>	two line explanation
<b>b</b>	comprehension questions
<b>c</b>	précis writing
<b>FIRST COMPARATIVE EXAMINATION (JUNE)</b>	
<b>SECOND COMPARATIVE EXAMINATION (SEPTEMBER)</b>	
<b>FIRST PRE-BOARD EXAMINATION (DECEMBER)</b>	
<b>SECOND PRE-BOARD EXAMINATION (JANUARY)</b>	
(* One Test Paper to be done every month)	
(** September and October to be considered as one month i.e. only one test paper to be done in both the months.)	

**Paper 1: English Language (2½ hours, 100 marks)**

**Question 1** – A composition on one of a number of subjects. (450-500 words)  
... **30 marks**

**Question 2** – A short composition based on the information and ideas provided. (200 words)  
... **20 marks**

**Question 3** – Short-answer questions to test grammar, structure and usage.  
... **20 marks**

**Question 4** – Comprehension (450-500 words)  
... **30 marks**

**ENGLISH (PRESCRIBED TEXTS)**

**Name of the Textbook:** Macbeth / Pygmalion  
Timeless Short Stories / ISC Poetry  
**Author:** William Shakespeare / Bernard Shaw  
T W Phillips / W R Gardner  
**Publisher:** OUP/ Orient Longman  
I U P / Madhubun Educational Book

Suggested Month	Chapter Number	Name of the Chapter	Page
April - May		Macbeth – Act IV	
		Pygmalion – Act IV	
		Timeless Short Stories	
	9	The Ideal Family	123 - 132
	10	After the Dance	133 - 146

		<b>ISC Poetry</b>	
	4	Kubla Khan	35 - 36
<b>June</b>	<b>REVISION / FIRST COMPARATIVE EXAMINATION</b>		
<b>July – August</b>		Macbeth – Act V	
		Pygmalion – Act V + Sequel	
		<b>Timeless Short Stories</b>	
	11	Love, Love, Love, Alone	147 - 166
	12	My Brother Henry	167 - 172
		<b>ISC Poetry</b>	
	13	He Fell Among Thieves	84 - 85
<b>September</b>	<b>REVISION / SECOND COMPARATIVE EXAMINATION</b>		
<b>October</b>		Macbeth – Revision	
		Pygmalion - Revision	
		<b>Timeless Short Stories</b>	
	13	Indian Camp	173 - 180
		<b>ISC Poetry</b>	
	1	Elegy Written In A Country Churchyard	9 - 13
<b>November</b>		Macbeth – Revision	
		Pygmalion - Revision	
		<b>Timeless Short Stories</b>	
	14	Growing Up	181 - 192
	15	The Huntsman	193 - 200
		<b>ISC Poetry</b>	
	15	Prayer Before Birth	89 - 90
	11	A Hot Noon In Malabar	71 - 72
<b>December</b>	<b>REVISION / FIRST PRE-BOARD EXAMINATION</b>		
<b>January</b>	<b>SECOND PRE-BOARD EXAMINATION</b>		

**Paper 2: Prescribed Texts (2½ hours, 100 marks)**

Candidates will be required to answer **four** questions as follows:

**One** textual question (compulsory) on the Shakespeare play / alternative prescribed play together with **three** other questions on at least **two** texts, which may include the Shakespeare play / alternative play.

Question 1 compulsory ... 25 marks, **three** other questions, each carrying 25 marks.

(Note: Candidates are reminded that infringement of the rubric will certainly invite penalty during the marking of answer scripts.)

The textual questions, which will be set on the Shakespeare play / alternative play, will contain **three** short passages and candidates will be required to answer questions set on **two** of the passages. These questions may require candidates to explain words and phrases, to rewrite passages in modern English, or to relate an extract to the work as a whole.

The rest of the questions on the Shakespeare play / alternative play and on other prescribed texts will require essay- type answers and will be set on the context, plot or plots, characters and other prominent literary qualities of the works prescribed.

It is recommended that in **Paper 2 about 30 minutes** should be spent on every question.

## हिन्दी

- Name of Textbook :**
- |                          |                |                      |
|--------------------------|----------------|----------------------|
| 1. काव्य तरंग            | <b>Author:</b> | 1. आर०पी० विश्वेन्दु |
| 2. कथा सुरभि             |                | 2. डा० पूरन चन्द     |
| 3. निर्मला               |                | 3. प्रेमचन्द         |
| 4. हिन्दी व्याकरण मंजूषा |                | 4. विनोदिनी शर्मा    |
- Publication :**
1. एवरग्रीन पब्लिकेशन्स
  2. जनता बुक
  3. एवरग्रीन पब्लिकेशन्स
  4. इण्टर यूनिवर्सिटी प्रेस

Suggested Month	Name of the book	Name of the Chapter
April/May	काव्य तरंग	मैं हूँ उनके साथ, मनुष्य और सर्प (कबीर - साखी, सूरदास-विनय और भक्ति, तुलसीदास - सच्ची मित्रता, दोहा एकादश, रहीमदास, भारत महिमा, विश्वराज्य - पुनरावृत्ति)
	कथा सुरभि	भाग्य-रेखा, लक्ष्मी का वाहन (बूढ़ी काकी, रक्षाबन्धन, संन्यासी, महाराजा का इलाज, मधुआ - पुनरावृत्ति)
	निर्मला	अध्याय १६, १७, १८, १९ (१ - १९) पुनरावृत्ति

	निबंध/व्याकरण	वर्णनात्मक, सूक्तिपरक, कहानी-लेखन, अपठित गद्यांश, मुहावरे, वाक्य संशोधन।
June	<b>FIRST COMPARATIVE EXAMINATION</b>	
July	काव्य तरंग	(i) ओ नभ में मंडराते बादल (ii) तूफानों की ओर (प्रियतम - पुनरावृत्ति)
	कथा सुरभि	कर्मनाशा की हार (घीसा, पाजेब - पुनरावृत्ति)
	निर्मला	अध्याय - २०, २१ (अध्याय - १०, ११, १२ पुनरावृत्ति)
	निबंध/व्याकरण	विचारात्मक, अपठित गद्यांश, मुहावरे, वाक्य संशोधन।
August	काव्य तरंग	इंसान बनाकर आ रहा सवेरा है। (मौन-निमन्त्रण, हल्दी घाटी - पुनरावृत्ति)
	कथा सुरभि	कामकाज
	निर्मला	अध्याय - २२, २३, २४ तक अध्याय - (१३, १४, १५ पुनरावृत्ति)
	निबंध/व्याकरण	कल्पनात्मक, समस्या-मूलक, अपठित गद्यांश, मुहावरे, वाक्य संशोधन।
September	<b>SECOND COMPARATIVE EXAMINATION</b>	
October / November	काव्य तरंग	सुमन के प्रति ( पुनरावृत्ति)
	कथा-सुरभि	घरती अब भी घूम रही है (ऐसी होली खेलो लाल - पुनरावृत्ति)
	निर्मला	अध्याय - २५, २६, २७
December		पुनरावृत्ति, मॉडल टेस्ट पेपर का अभ्यास
<b>FIRST PRE-BOARD EXAMINATION</b>		
January		XI, XII के पाठ्यक्रम की पुनरावृत्ति, मॉडल टेस्ट पेपर का अभ्यास
<b>SECOND PRE-BOARD EXAMINATION</b>		

There will be **one** paper of **3** hours duration, which will consist of two sections:

**Section 1:** Language (50 marks)

**Section 2:** Prescribed Textbooks (50 marks)

Candidates will be required to answer **four** questions on **at least three** of the prescribed textbooks.

## HISTORY

**Name of the Textbook:** 1. **Modern Indian History - 2**  
 2. **Mastering World History**  
 3. **History of Modern Europe**

**Author:** 1. **D. N. Kundra** 2. **Norman Lowe**  
 3. **V.D. Mahajan**

Suggested Month	Topic	Name of the Chapter
April / May	1	The Dawn and rise of Indian Nationalism (1885 – 1905) (i – iv)
	2	The Growth of Radical Nationalism (at the turn of the 20 <sup>th</sup> century) (i – iv)
	7	Fascism and Nazism (i – vi)
	8	The Collapse of International Order in the 1930s (i – iii)
<b>June</b>		<b>FIRST COMPARATIVE EXAMINATION</b>
July	3	Communal Factors in Indian Politics (1885-1919) (i – iv)
	4	The years of Gandhian Leadership of the National Movement (i – vi)
	5	The Last Phase (1935-1947) (i – iv)
August	9	The Second World War (1939-1945) (i – iii)
	6	Post Independence India (1947-1962) (i – ii)
September		<b>REVISION</b>
		<b>SECOND COMPARATIVE EXAMINATION</b>
October	10	Tension and Co-operation after the Second World War (i – iv)
November	11	The Middle East (i –iii)
December		<b>REVISION</b>

		<b>FIRST PRE-BOARD EXAMINATION</b>
January		<b>SECOND PRE-BOARD EXAMINATION</b>

There will be one paper of three hours duration of 100 marks divided into two parts.

**Paper I (20 marks)** will consist of compulsory short answer questions testing fundamental factual knowledge and understanding of the entire syllabus.

**Paper II (80 marks)** will be divided into **two** sections, Section **A** and Section **B**, each consisting of **five** questions. Each question shall carry 16 marks.

Candidates will be required to attempt **two** questions from each section and **one** question from either section A or section B. A total of **five** questions will be attempted from part II.

## PSYCHOLOGY

**Name of the Textbook:** 1. **Psychology**  
 2. **Introduction to Psychology**

**Author:** 1. **Robert Baron**  
 2. **Morgan & King**

**Publisher:** 1. **Pearson** 2. **Tata Mc Graw Hill**

Suggested Month	Name of the Chapter
April/May	Personality
	Stress and Stress Management
	Attitudes
<b>June</b>	<b>FIRST COMPARATIVE EXAMINATION</b>
July	Individual Differences and Psychological Testing, Statistics in Psychology, Intelligence, Achievement, Interest and Aptitude
September	<b>REVISION</b>
	<b>SECOND COMPARATIVE EXAMINATION</b>
October	Social Thought and Social Behaviour
November	Psychological Disorders and Psychotherapy
December	Applications of Psychology (i) School (ii) Choice of Career (iii) Industry (iv) Crime (v) Marriage

	<b>REVISION</b>
	<b>FIRST PRE-BOARD EXAMINATION</b>
January	<b>SECOND PRE-BOARD EXAMINATION</b>
<b>Internal Assessment</b> – Two studies to be undertaken on topics given in the Council syllabus and as guided by the subject teacher.	

\* There will be two papers in the subject.

**Paper I – Theory:** Three hours ... 70 marks

**Paper II – Practical work** ... 30 marks

Paper I (Theory)

**Part I (20 marks)** will consist of compulsory short answer questions relating to the fundamental aspects of the entire syllabus.

**Part II (50 marks)** will consist of **two** sections A and B.

Candidates will be required to answer **two** out of **three** questions from section A and **three** out of **five** questions from Section B. Each question in this part shall carry 10 marks.

## ECONOMICS

**Name of the Textbook:** Frank ISC Economics Class XII

**Author:** D.K. Sethi & U. Andrews

**Publisher:** Frank Brothers & Co.

Suggested Month	Chapter Number	Name of the Chapter	Page
April	1	Micro and Macro Economics: Introduction	1
	2	Demand and Law of Demand	13
	3	Theory of Consumer Behaviour: Marginal Utility and Indifference Curve Analysis	43
	4	Elasticity of Demand	71
May	5	Supply – Law of Supply and Price Elasticity of Supply	103
	6	Laws of Returns – Returns to a Factor and Returns to Scale	136
	7	Equilibrium Price: Market Equilibrium	163
	14	National Income and Circular Flow of Income	338
	15	Nature of Goods and Services Produced	360
	16	National Income Aggregates	367
<b>June</b>	<b>FIRST COMPARATIVE EXAMINATION</b>		
July	17	Measurement of National Income	392
	8	Cost and Revenue Analysis	185
	9	Forms of Market	236

	10	Equilibrium of Firm	258
August	11	Determination of Equilibrium Price and Output Under Perfect Competition, Monopoly and Monopolistic Competition	269
	12	Theory of Distribution – Marginal Productivity Theory and Determination of Wages	290
	13	The Theory of Distribution – Rent, Interest and Profit	313
September		<b>REVISION</b>	
<b>SECOND COMPARATIVE EXAMINATION</b>			
October	18	International Trade: Need and Basis	435
	19	Balance of Payments	457
	20	Public Finance – Taxation	477
November	20	Public Finance – Taxation (Continued)	477
	21	Public Expenditure	515
	22	Public Debt	528
	23	Fiscal Policy and Deficit Financing	541
December	24	Government Budget	559
		<b>REVISION</b>	
<b>FIRST PRE-BOARD EXAMINATION</b>			
January		<b>SECOND PRE-BOARD EXAMINATION</b>	

There will be **one** paper of three hours duration of 100 marks divided into two parts.

**Part I (30 Marks)** will consist of compulsory short answer questions testing knowledge, application and skills relating to elementary / fundamental aspects of the entire syllabus.

**Part II (70 marks)** will consist of **eight** questions out of which the candidate will be required to answer **five** questions. Each question in this part shall carry 14 marks.

## COMMERCE

**Name of the Textbook:** A Complete Course in ISC Commerce Vol. II

**Author:** R.P. Maheshwari

**Publisher:** Pitambar Publishing Co. Pvt. Ltd.

Suggested Month	Chapter Number	Name of the Chapter	Page
April -May	1	Corporate Organization	2
	2	Formation of a Joint Stock Company	22
	3	Multinational Corporations	40
	4	Managerial Personnel	52
<b>June</b>	<b>FIRST COMPARATIVE EXAMINATION</b>		

July	5	Financing	62
	6	Financial Institutions	87
	7	Commercial Banks	101
	8	Mutual Funds	111
August	9	Management	120
	10	Functions of Management	134
	11	Principles of Management	148
<b>September</b>	<b>SECOND COMPARATIVE EXAMINATION</b>		
October- November	12	Communication	156
	13	Marketing and its Functions	176
	14	Sales Promotion & Advertising	193
	15	Personal Selling (Salesmanship)	218
<b>December</b>	<b>REVISION</b>		
	<b>FIRST PRE-BOARD EXAMINATION</b>		
<b>January</b>	<b>SECOND PRE-BOARD EXAMINATION</b>		

There will be one paper of three hours duration of 100 marks divided into two parts.

**Part I (30 marks)** will consist of compulsory short answer questions testing knowledge, application and skills relating to elementary / fundamental aspects of the entire syllabus.

**Part II (70 marks)** will have nine questions out of which candidates will be required to answer seven questions and each question will carry 10 marks.

## ACCOUNTS

**Name of the Textbook:** New ISC Accountancy (Class XII)

**Author:** D.K. Goel and Rajesh Goel

**Publisher:** Avichal Publishing Company

Suggested Month	Chapter Number	Name of the Chapter	Page
April	3	Consignment Accounts	3.1
	4	Joint Venture	4.1
May	1	Cost Sheet	1.1
	2	Stores Ledger and Stock Valuation	2.1
	5	Sectional balancing system and Self balancing system	5.1
<b>June</b>	<b>FIRST COMPARATIVE EXAMINATION</b>		
July	6	Accounting for partnership firms - Fundamentals	6.1
	7	Admission of a partner	7.1
August	8	Change in profit sharing ratio among	8.1

		the existing partners	
	9	Retirement or Death of a partner	9.1
	10	Partnership Dissolution	10.1
September	<b>REVISION</b>		
	<b>SECOND COMPARATIVE EXAMINATION</b>		
October	13	Final Accounts of Companies	13.1
	11	Company Accounts – Issue of Shares	11.1
November	12	Company Accounts – Issue of Debentures	12.1
	14	Funds Flow Statement	14.1
	15	Cash Flow Statement	15.1
December	16	Accounting Ratios	16.1
	<b>REVISION</b>		
	<b>FIRST PRE-BOARD EXAMINATION</b>		
January	<b>SECOND PRE-BOARD EXAMINATION</b>		

There will be one paper of three hours duration of 100 marks divided into two parts.

**Part I (30 marks)** will be compulsory and will consist of two questions based on the entire syllabus.

**Question 1 (20 marks)** will include compulsory short answer questions, testing knowledge, application and skills relating to elementary / fundamental aspects of syllabus.

**Question 2 (10 marks)** will be a compulsory numerical question.

**Part II (70 marks)** Candidates will be required to answer five questions out of eight questions from this section. Each question shall carry 14 marks.

## MATHEMATICS

**Name of the Textbook:** New ISC Mathematics II

**Author:** S.K. Gupta & O.P. Malhotra

**Publisher:** S. Chand

Syllabus as per the Council Syllabus 2009

Suggested Month	Chapter Number	Name of the Topic
		<b>Section A</b>
April / May	1	Determinants
	2	Matrices
	3	Family of lines and Pairs of Straight Lines
	4, 5, 6	Conics
	23	Boolean Algebra and Switching Circuits
	7	Inverse Trigonometric Functions

	8	Standard limits and Differentiation
	9	Indeterminate Forms of limits
	10	Mean Value Theorems
	11	Maxima and Minima
		<b>Section B</b>
	27	Scalar or Dot Product of Vectors
	28	Vector or Cross Product of Two Vectors
	29	Triple Products
		<b>Section C</b>
	32	Discount and Bill of Exchange
	35	Application of Calculus in Commerce and Economics
<b>June</b>		<b>FIRST COMPARATIVE EXAMINATION</b>

July		<b>Section A</b>
	12	Integration
	13	Standard Methods of Integration
	14	Special Integrals
	15	Definite Integrals
August	22	Differential Equations
	17	Measures of Dispersion
		<b>Section B</b>
	25	Straight line in 3D space
	24	The Plane
		<b>Section C</b>
	34	Linear Programming
	33	Annuities
September		<b>Section B</b>
	26	The Sphere
		<b>REVISION</b>
		<b>SECOND COMPARATIVE EXAMINATION</b>
October		<b>Section A</b>
	16	Areas and Volumes
	21	Complex Numbers
	18	Correlation
November	19	Regression Analysis
	20	Probability
		<b>Section B</b>
	30	Further Probability – Baye's theorem
	31	Probability Distribution
		<b>Section C</b>
	36	Index Numbers
	37	Moving Average
December		<b>REVISION</b>

	<b>FIRST PRE-BOARD EXAMINATION</b>
<b>January</b>	<b>SECOND PRE-BOARD EXAMINATION</b>

There will be one paper of **three** hours duration of 100 marks. The syllabus is divided into **three** sections A, B and C. Section A is compulsory for all candidates. Candidates will have a choice of attempting questions from **either** section B or Section C.

**Section A (80 marks)** will consist of 9 questions. Candidates will be required to answer. **Question 1 (compulsory)** and **five** out of the rest of the eight questions.

**Section B/C (20 marks)** Candidates will be required to answer **two** questions out of **three** from either Section B or Section C.

## PHYSICS

**Name of the Textbook:** Nootan ISC Physics Class XII  
**Author:** Kumar & Mittal  
**Publisher:** Nageen Prakashan Pvt. Ltd

Suggested Month	Topic Number	Name of the Topic
April	1 – 6	Coulomb's law
		Electric field; electric dipole
		Gauss' Theorem
		Electric Potential
		Capacitors and Dielectrics
		Steady current
May	7 – 13	Electric resistance, Ohm's law
		D.C. Circuits and measurements
		Ammeters & Voltmeters
		Heating effect of current
		Thermoelectricity
		Magnetic field & Earth's magnetism
		Magnetic classification of substances
<b>June</b>		<b>FIRST COMPARATIVE EXAMINATION</b>
July	14 – 19	Magnetic Effect of Current
		Magnetic Torque on a current carrying loop, Moving coil galvanometer
		Electromagnetic Induction
		Transient Current
		Generators & Motors
		Alternating Current Circuits
August	25 – 30	Refraction of light at plane surfaces
		Refraction of light through a Prism
		Refraction of light at spherical surfaces, Lenses
		Dispersion of light, Spectrometer and Spectra

		Spherical and chromatic aberrations in lenses
		Microscope & Telescope
<b>September</b>		<b>SECOND COMPARATIVE EXAMINATION</b>
October	20 – 24	Electromagnetic waves
		Wave nature of light, Huygen's principle
		Interference of light
		Diffraction of light
		Polarisation of light
November	31 – 39	Cathode Rays, Discovery of electron
		Photo-electric effect
		Wave particle duality, Matter wave
		Structure of atom and origin of spectra, Bohr's theory of hydrogen atom
		X Rays
		Radioactivity
		Nuclear structure
		Energy mass equivalence, Nuclear binding energy
		Nuclear fission & fusion, Sources of energy
December	40 – 43	Conductors, Insulators and Semi Conductors
		Junction Diodes
		Junction Transistors
		Logic gates
		<b>REVISION</b>
		<b>FIRST PRE-BOARD EXAMINATION</b>
<b>January</b>		<b>SECOND PRE-BOARD EXAMINATION</b>

**LIST OF PRACTICALS**

<b>April</b>	1	Verify Ohm's law for the given unknown resistance (a 60 cm long resistance wire) plotting a graph of P.d. Vs. current. From the slope of the graph and length of the wire calculate resistance per cm. of the wire.
<b>May</b>	2	Using meter bridge determine the resistance of 100 cm long constantan wire. Also measure radius of the wire by a screw gauge and hence calculate resistivity of the material of the wire.
	3	Using a potentiometer study the variation of potential difference with the length of the wire for a constant current. Also draw graph of P.d. vs. length of the wire tapped and find specific resistance of the wire.
<b>July</b>	4	Compare the e.m.f. of two cells using a potentiometer.
	5	To find internal resistance of a cell by potentiometer method.
	6	Compare the magnetic moments of two magnets using a deflection magnetometer.

<b>August</b>	7	Compare the magnetic moments of two magnets of the same size but different strength by using a vibration magnetometer.
	8	To determine the horizontal component of earth's magnetic field by using a magnetometer.
	9	To find the focal length of a convex lens by u-v method. Draw the necessary graph.
<b>September</b>	10	To find the focal length of a convex lens by displacement method.
<b>October</b>	11	To find the focal length of a convex lens by using coaxially an auxilliary convex lens. Draw the necessary graph.
	12	To find the focal length of a concave lens by using coaxially an auxilliary convex lens.
<b>November</b>	13	To find the refractive index of the material of convex lens by Boys method.
	14	To find the refractive index of a liquid by using a convex lens and a plane mirror.
<b>December</b>	15	Using a spectrometer determine the angle of prism and the angle of minimum deviation produced by a prism. Hence calculate the refractive index of the material of the prism.
	16	Given the figure of merit and resistance of a galvanometer, convert it to (a) an ammeter of range, say 2A and (b) a voltmeter of range 4V. Also calculate the resistance of the new ammeter and voltmeter.

**Note:** You are advised to refer to the Council's syllabus to have more details on practicals especially on types of graphs on lens experiments.

The following guidelines are applicable for the Council's examination 2009.

**Project work – 10 marks**

The project work is to be assessed by a Visiting Examiner appointed locally and approved by the Council.

All candidates will do project work involving some physics related topics, under the guidance and regular supervision of the Physics teacher.

Candidates are to prepare a technical report formally written, including an abstract, some theoretical discussion, experimental setup, observations with tables of data collected, analysis and discussion of results, deductions, conclusion, etc. (after the draft has been approved by the teacher). The report should be kept simple, but neat and elegant. No extra credit shall be given for type-written material/decorative cover, etc. Teachers may assign or students may choose any one project of their choice.

There will be two papers in the subject.

**Paper I:** Theory – three hours ... 70 marks

**Paper II:** Practical – three hours ... 20 marks

**Project work:** 10 marks

## CHEMISTRY

Name of the Textbook: Nootan ISC Chemistry For Class XII  
Author: H. C. Srivastava  
Publisher: Nageen Prakashan

Suggested Month	Topic Number	Name of the Chapter
April/ May	3	Chemical Bonding
	20	Isomerism
	7	Ionic Equilibria
	4	States of Matter: Structure and Properties
	13	Types of chemical reactions and their mechanisms
	10	Extraction, Properties and Uses of Metals: Sn, Al, Cu, Ag, Pb
	19	Polymers
	14(i)	Ethers
<b>June</b>	<b>FIRST COMPARATIVE EXAMINATION</b>	
July / August	1	Relative Molecular Mass and Mole
	8	Electrochemistry
	11	Isolation, Manufacture, Properties and Uses of non-metals: Si, F, P, Br, I.
	14	Aldehydes, Ketones, Carboxylic acids and Acid derivatives
	9	Chemical Energetics
<b>September</b>	<b>SECOND COMPARATIVE EXAMINATION</b>	
October	6	Chemical Kinetics
	18	Aromatic Compounds (Benzene and its derivatives)
	12	Preparation, Properties and Uses of Compounds
	17	Carbohydrates
November	5	Coordination Compounds
	16	Cyanide, Isocyanide, Cyanates, Isocyanates, Nitro Compounds and Amines
	2	Nuclear and Radiochemistry
December	15	Glycine
		<b>REVISION</b>
	<b>FIRST PRE-BOARD EXAMINATION</b>	
<b>January</b>	<b>SECOND PRE-BOARD EXAMINATION</b>	

### PRACTICALS

S. No.	LIST OF PRACTICALS
1	Mixture Analysis
2	Testing of Vitamins A and B
3	Identification of Organic compounds

4	Volumetric analysis
5	Testing of food material for adulteration
6	Study of the rate of reaction
7	Project work

### Note:

There will be **two** papers in the subject.

**Paper I (Theory):** Three hours (70 marks)

**Paper II (Practical):** Three hours (20 marks), project work (7 marks) and practical file (3 marks)

### Paper I (Theory)

There will be one paper of three hours duration divided into two parts.

**Part I (20 marks)** will consist of compulsory short answer questions, testing knowledge, application and skills relating to elementary/fundamental aspects of the entire syllabus.

**Part II (50 marks)** will be divided into **three** sections A, B and C. Candidates are required to answer **two** out of **three** questions from Section A (each carrying 9 marks), **two** out of **three** questions from Section B (each carrying 7 marks) and **two** out of **three** from Section C (each carrying 9 marks). Therefore, a total of six questions are to be answered in Part II.

Refer Council Syllabus 2009 for details.

## BIOLOGY

Name of the Textbook: Nootan ISC Biology for Class XII  
Author: Prof V Singh and Dr D K Jain  
Publisher: Nageen Prakashan Pvt. Ltd.

Suggested Month	Topic Number	Name of the Topic
April	1	<b>Multicellularity: Structure and Function – Plant Life</b>
	(i)	Tissues
	(ii)	Absorption and movement of water in plants
	(iii)	Mineral nutrition in plants
May	(iv)	Modes of nutrition (excluding photosynthesis)
	2	<b>Multicellularity: Structure and Function –Animal Life</b>
	(iii)	Respiration
	(iv)	Circulation
	(v)	Excretion
	3	<b>Origin and Evolution of Life</b>
	(i)	Origin of life
	(ii)	Theory of evolution

FIRST COMPARATIVE EXAMINATION		
June		
July	4	<b>Applications of Biology</b>
	(iii)	Biofertilizers
	(iv)	Pesticides
	1	<b>Multicellularity: Structure and Function – Plant Life</b>
	(iv)	Modes of nutrition - Photosynthesis
	(v)	Reproduction and development in Angiosperms
	(vi)	Differentiation and organ formation
	(vii)	Plant growth
August	(viii)	Photomorphogenesis
	2	<b>Multicellularity : Structure and Function- Animal Life</b>
	(i)	Tissues
	(viii)	Locomotion
	(ii)	Nutrition
September	(vi)	Endocrine system
SECOND COMPARATIVE EXAMINATION		
October	(vii)	Nervous System
	4	<b>Applications of Biology</b>
	(i)	Domestication of plants and crop improvement
	(ii)	Crops today
	(viii)	Human population growth
	(v)	Human diseases
November	(vi)	Mental health and community health
	(vii)	Biomedical engineering
	2	<b>Multicellularity : Structure and Function- Animal Life</b>
	(ix)	Reproduction
	(x)	Growth, ageing and death
December		<b>REVISION</b>
FIRST PRE-BOARD EXAMINATION		
January		<b>SECOND PRE-BOARD EXAMINATION</b>

Month		LIST OF PRACTICALS
April - May	1.	<b>Taxonomy</b>
	(i)	Family Malvaceae – type – china rose
	(ii)	Family Compositae – type - sunflower
	(iii)	Family Leguminosae – subfamily – papilionaceae – type – sweet pea
	(iv)	Family Solanaceae – type - petunia
	(v)	Family Liliaceae – type – onion/Amarallydaceae – type – lily
April - May	2.	<b>Experiments</b>
	(i)	Demonstration of plasmolysis
	(ii)	Demonstration of osmosis in living plant cells (potato osmoscope)

July	(iii)	Demonstration of unequal transpiration in leaves	
	(iv)	To demonstrate that CO <sub>2</sub> is necessary for photosynthesis.	
	(v)	To demonstrate that O <sub>2</sub> evolution takes place during photosynthesis.	
	(vi)	Effect of different CO <sub>2</sub> concentrations on the rate of photosynthesis.	
	(vii)	Demonstration of the effect of temperature on enzyme (diastase) action on starch solution.	
	August	3.	<b>Model study</b>
		(i)	Human digestive system
(ii)		Human heart	
(iii)		Human eye	
(iv)		Human ear	
	(v)	Human brain	
September	4.	<b>Slide preparation</b>	
	(i)	T.S. of dicot stem	
	(ii)	T.S. of monocot stem	
	(iii)	Striated muscles of cockroach	
	(iv)	Nerve cells from spinal cord of a vertebrate	
	(v)	Preparation of blood cells.	
October	5.	<b>Spotting</b>	
	(i)	Identify and comment on permanent slides of	
	(a)	T.S. of monocot and dicot stem	
	(b)	T.S. of monocot and dicot root	
	(c)	T.S. of monocot and dicot leaf	
	(d)	T.S. of spinal cord of mammal	
	(e)	T.S. of bone of mammal	
(f)	T.S. of pancreas of mammal		
	(ii)	Comment on experimental set up studied in physiology.	

**Note:** For project (10 marks) refer to Council syllabus 2009.

### PROJECT WORK AND PRACTICAL FILE - 10 Marks

Project Work – 7 Marks

The project work is to be assessed by a Visiting Examiner appointed locally and approved by the Council.

The candidate is to creatively execute one project/assignment on an aspect of biology. Teachers may assign or students may choose any one project of their choice. Students can choose any other project besides the ones indicated in the list. Following is only a suggestive list of projects:

- (i) Diabetes.
- (ii) Endocrine glands.
- (iii) Vegetarianism / non-vegetarianism.
- (iv) Role of micro-organisms in industry.
- (v) Drug addiction and community.
- (vi) Balanced diet.
- (vii) Human population.

- (viii) Cancer.
- (ix) AIDS/Hepatitis.
- (x) Cell organelles.

**Ecology**

- (i) Abiotic and biotic factors.
- (ii) Food chains.
- (iii) Ecological pyramids.
- (iv) Ecosystems.
- (v) Biomass and bionumber.
- (vi) Carbon, nitrogen and mineral cycles.
- (vii) Environmental resistance.
- (viii) Ecological impact of pollution.
- (ix) Acid rain.
- (x) Ozone layer.
- (xi) Conservation of natural resources.
- (xii) Green house effect.

**Practical File – 3 Marks**

The Visiting Examiner is required to assess students on the basis of the Biology Practical file maintained by them during the academic year.

There will be two papers in the subject.

Paper I: Theory: (three hours) ... 70 marks

Paper II: Practical: (three hours) ... 20 marks

Project work: (7 marks) Practical File (3 Marks)

**Paper I:** Theory (70 marks) there will be one paper of three hours duration divided into two parts.

**Part I (20 marks)** will consist of compulsory short answer questions, testing knowledge, application and skills relating to elementary/fundamental aspects of the entire syllabus.

**Part II (50 marks)** will be divided into **two** sections A and B. Candidates are required to answer **three** out of **five** questions from Section A and **two** out of **four** questions from Section B. Each question in this part shall carry 10 marks.

**COMPUTER SCIENCE**

**Name of the Textbook:** Computer Science with C++ A Textbook for Class XII

**Author:** Sumita Arora

**Publisher:** Dhanpat Rai and Company

Suggested Month	Chapter No	Name of the Chapter
April/May	1	Boolean Algebra
	2	Computer Hardware

	3	C++ Revision Tour I
	4	C++ Revision Tour II
<b>June</b>	<b>FIRST COMPARATIVE EXAMINATION</b>	
July	9	Concept of Inheritance
August	10	Using Library Classes
September	6	Recursive and Recursion Function
	<b>SECOND COMPARATIVE EXAMINATION</b>	
October - November	5	C++ Revision Tour III Data Structures Stack, Queue using array + classes
December	7	Introducing, Lists & Trees
	8	Recursive Data Structure
	<b>REVISION</b>	
	<b>FIRST PRE-BOARD EXAMINATION</b>	
<b>January</b>	<b>SECOND PRE-BOARD EXAMINATION</b>	

There will be two papers in the subject:

**Paper 1:** Theory (three hours) ... 100 marks

**Paper 2:** Practical (three hours) ... 100 marks

**Paper 1:** (Theory) Paper 1 will be of three hours duration and be divided into two parts.

**Part 1:** (30 marks) this part will consist of compulsory short answer questions, testing knowledge, application and skills relating to elementary / fundamental aspects of the entire syllabus.

**Part 2:** (70 marks) this part will be divided into **two** sections A and B. Candidates are required to answer **three** questions out of **five** from Section A and **four** questions out of **six** from section B. Each question in this part shall carry 10 marks.

**BUSINESS MATHEMATICS**

**Name of the textbook:** New ISC Business Mathematics

**Author:** M L Aggarwal

**Publisher:** Avichal Publication

Suggested Month	Chapter Number	Name of the Chapter	Page
		<b>Section A</b>	
April / May	4	Determinants	71
	7	Differentiation	175
	9	Integration	227
		<b>Section B</b>	
	10	Definite Integrals	295
		<b>Section C</b>	
	13	Measures of Dispersion	385

		<b>Section D</b>	
	17	Discount	565
<b>June</b>	<b>FIRST COMPARATIVE EXAMINATION</b>		
July		<b>Section A</b>	
	6	Conics	143
	2	Mathematical Induction	39
	5	Matrices	107
August	1	Permutations and Combinations	1
		<b>Section B</b>	
	11	Areas and Volumes	323
	12	Differential Equations	349
September		<b>Section C</b>	
	15	Index Numbers and Moving Averages	455
		<b>Section D</b>	
	18	Average due Date and Insurance	595
<b>September</b>	<b>SECOND COMPARATIVE EXAMINATION</b>		
October		<b>Section A</b>	
	3	Binomial Theorem	49
	8	Maxima and Minima	207
		<b>Section C</b>	
	14	Correlation and Regression	415
November		<b>Section C</b>	
	16	Probability	483
		<b>Section D</b>	
	19	Annuities	607
	20	Application of Derivatives in Commerce and Economics	639
December		<b>REVISION</b>	
	<b>FIRST PRE-BOARD EXAMINATION</b>		
<b>January</b>	<b>SECOND PRE-BOARD EXAMINATION</b>		

There will be one paper of three hours duration of 100 marks and divided into two parts.

**Part I (30 marks)** will consist of compulsory short answer questions testing knowledge, application and skills relating to elementary / fundamental aspects of the entire syllabus.

**Part II (70 marks)** will consist of four sections – A, B, C and D. Candidates will be required to answer **four** out of **six** questions from Section A, **two** out of **three** questions from Section B, **two** out of **three** questions from Section C and **two** out of **three** questions from Section D. Each question in this part shall carry 7 marks.

## GEOGRAPHY

Name of the Textbook: ISC Geography Part II

Author: D R Kullar

Publisher: Kalyani

Suggested Month	Topic Number	Name of the Chapter
April/May	1	<b>Physical Environment</b> Locational Setting-India: Size and area.
	2	Structure of India- Relief and drainage, major physiographic divisions and their characteristics.
	3	Climate: India
	4	Natural Vegetation
		Map Work
<b>June</b>	<b>FIRST COMPARATIVE EXAMINATION</b>	
July	5	Population and Human Settlements (i) Population of India compared to six countries (ii) National and State level patterns of population distribution. (iii) State level patterns population density. (iv) State level pattern of population growth in the last three decades (v) Migration trends over the last 30 years. (vi) Demographic attributes at state and national level-trends and patterns (vii) Rural settlements (viii) Urban settlements Map Work
August	6	Resources of India and their Utilisation (i) Land Resources (ii) Water Resources and types of irrigation (iii) Agriculture – Types, Development and Problems (iv) Fishing in India (v) Minerals and Power Resources Map Work
	7	Infrastructural Resources (Development of Transport and Communication) (a) Railways – roadways – water transport
September		Air Transport – Pipelines (b) Communication
		<b>REVISION</b>
	<b>SECOND COMPARATIVE EXAMINATION</b>	

October	8	Industries (a) Study of the location and distribution of important industrial centres; a general comparison of disparities (b) Major and minor industrial regions (c) Location, production and growth of the following industries: (i) agro based industries (ii) mineral based industries (d) Tourism industry
November	9	Regional Economic Development (Case Studies) (i) Bastar Tribal Development Block (ii) National Capital Region and Mumbai Metropolitan Region (iii) Kanara coastal zone
	<b>Map of India</b>	Topics 1 -9.
December		<b>REVISION</b>
<b>FIRST PRE-BOARD EXAMINATION</b>		
January		<b>SECOND PRE-BOARD EXAMINATION</b>

#### Practical work

Month	Topic
July	1. Drawing of Scales
August	2. Drawing of cross-section or profiles of imp. contours
October	3. Understanding and illustrating location references of SOI maps
November	4. Map reading and interpretation of SOI Maps.
December	5. Elementary principles of Survey an Area.

**Practical work: 10 marks**  
**Project work: 10 marks**  
**Viva: 10 marks**  
**Theory: 70 marks**

There will be one theory paper of **three** hours divided into two parts –

**Part I ( 30 marks )** will be **compulsory** and will consist of Section A and Section B.

**Section A** will include **compulsory** short answer questions testing knowledge, application and skills related to elementary / fundamental of the entire syllabus.

**Section B** will consist of one question on **map work**.

**Part II ( 40 marks )** will consist of **seven** questions. Candidates will be required to answer **four** out of **seven** questions. Each question in this part shall carry 10 marks

## BIOTECHNOLOGY

**Name of the Textbook: Textbook of Biotechnology (Class XII)**

**Author: Dr R C Dubey**

**Publisher: S. Chand**

Suggested Month	Topic Number	Name of the Topic
April	1.	<b>Molecular Biology</b>
	(a)	Biomolecules
	(b)	Nucleic acids
	(c)	Protein synthesis
May	2.	<b>Genetic Engineering</b>
	(a)	Innovations in Biotechnology
July	(b)	Introduction to gene cloning
	(c)	Biochemical techniques
	(d)	Gene Analysis techniques
August	3.	<b>Cell Culture Technology</b>
	(a)	Introduction and techniques
	(b)	Cell culture and cellular totipotency
<b>September</b>	<b>SECOND COMPARATIVE EXAMINATION</b>	
October	(c)	Germplasm Conservation
	(d)	Applications of cell culture technology
November	4.	<b>Bioinformatics</b>
	(a)	Introduction
	(b)	Genomics
	(c)	Proteomics
December		<b>REVISION</b>
<b>FIRST PRE-BOARD EXAMINATION</b>		
<b>January</b>	<b>SECOND PRE-BOARD EXAMINATION</b>	

## PRACTICALS

<b>April</b>	1	Determination of blood groups
<b>May</b>	2	Salivary amylase activity on starch

<b>July</b>	3	Sterilization techniques
<b>August</b>	4	Separation of plant pigments by chromatography
<b>September</b>	5	Preparation of culture media
	6	Growth of bacteria in culture
<b>October</b>	7	Preparation of buffers
	8	Isolation of proteins
<b>November</b>	9	Identification of Plasmid DNA and Genomic (chromosomal) DNA bands in the gels (by photographs only)
	10	Estimation of DNA either by colourimeter or spectrophotometer.

**Note:** For project (10 marks) refer to Council syllabus 2009.

There will be two papers in the subject.

Paper I: Theory: (three hours) ... 70 marks

Paper II: Practical: (three hours) ... 20 marks

Project work: 7 marks, Practical File: 3 marks

**Paper I:** Theory (70 marks) there will be one paper of three hours duration divided into two parts.

**Part I (20 marks)** will consist of compulsory short answer questions, testing knowledge, application and skills relating to elementary/fundamental aspects of the entire syllabus.

**Part II (50 marks)** will consist of **eight** questions out of which the candidates will be required to answer **five** questions. Each question in this part shall carry 10 marks.

## ENVIRONMENTAL EDUCATION

**Name of the textbook:** ISC Environmental Education Part II

**Author:** Dr A. N. Rai

**Publisher:** Goyal Brothers

Suggested Month	Chapter Number	Name of the Chapter
April	1	Biodiversity
	2	Biodiversity for Sustenance of Mankind
	3	Ecological Role and Economic Potential of Biodiversity
	4	Loss of Biodiversity and its Conservation
May	5	Environmental Management
	6	Legal Provisions for Environmental Management

	7	Approaches for Environmental Management
<b>June</b>	<b>FIRST COMPARATIVE EXAMINATION</b>	
July	8	Sustainable Development
	9	Role Play in Sustainable Development
	10	Support Base for Sustainable Development
August	11	Sustainable Agriculture
	12	Green Revolution
	13	Soil Management
<b>September</b>	<b>SECOND COMPARATIVE EXAMINATION</b>	
October	14	Irrigation Systems and use of Manures and Fertilizers
	15	Crop Protection and Pest Management
November	16	Elements of Sustainable Agriculture
	17	Biotechnology for Crop Improvement
	18	Agricultural Management
December	<b>REVISION</b>	
	<b>FIRST PRE-BOARD EXAMINATION</b>	
January	<b>SECOND PRE-BOARD EXAMINATION</b>	

**Note:**

There will be two papers in the subject:

Paper I	Theory	3 hours	70 marks
Paper II	Practical/Project work	30 marks	

### Paper I Theory

There will be one paper of three hours duration carrying 70 marks.

The paper will have two sections:

**Section A (Compulsory)** will contain short answer questions covering the entire syllabus.

**Section B** will consist of questions, which will require detailed answers. There will be a choice of questions in this section.

For practical / project work refer Council syllabus 2009.