

7. ADDITIONAL SUBJECTS

(A) MUSIC

Any one of the following can be offered : (Hindustani or Carnatic)

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| 1. Hindustani Music - Vocal | 4. Carnatic Music - Vocal |
| or | or |
| 2. Hindustani Music Melodic Instruments | 5. Carnatic Music - Melodic Instruments |
| or | or |
| 3. Hindustani Music Percussion Instruments | 6. Carnatic Music - Percussion Instruments |

(I) HINDUSTANI MUSIC (VOCAL) – Code No. 034.

CLASS IX

Theory	2 hours	25 Marks
Practical		75 Marks
	THEORY	68 Pds.

1. An outline history of Indian Music.
2. Definition of the following :
Sangeet, Nada, Swara, Shuddha, Vikrit (Komal, Teevra) Sthana (Mandra, Madhya, Tara), Aaroha Avaroha, Raga, Laya, Tala, Sam, Tali, Khali, Matra, Avartana

PRACTICAL

202 pds.

1. (a) National Anthem
(b) Four folk or tribal songs
(c) Four devotional songs
(d) Three patriotic songs
(e) Community singing (two songs)
2. Aaroha, Avaroha, Pakad and Drut Khyal in the following Ragas : Yaman, Bhairav, Bhopali with few tanas.
3. Recitation of the Thekas of Teentala, Kaharwa, Dadra and Jhaptal; keeping tala with hand beats.
4. Eight Tala-Baddha, Alankars set to different Talas.

CLASS X

Theory	2 hours	25 Marks
Practical		75 Marks
	THEORY	68 pds.

1. Basic knowledge of the structure and tuning of Taanpura.
2. Knowledge of the Notation systems laid down by Pt. Vishnu Digamber and Pt. V.N. Bhatkhande.
3. Definition of Vadi, Samvadi, Anuvadi, Vivadi, Alap
4. Brief description of Natya Shastra, Sangeet Ratnakar.

PRACTICAL

202 PDS.

1. Community Singing :
 - (a) Two songs in different regional languages.
 - (b) One Tagore song
2. Aaroha, Avaroha, Pakad and Drut Khyal in the following Ragas : Kafi, Khamaj, Sarang and Desh with simple elaborations and few tanas.

Suggested Reference Books :

1. Kramik Pustak Malika by Pandit V.N. Bhatkhande
2. Rag Vigyan by Pandit V.N. Patwardhan.

(II) HINDUSTANI MUSIC (MELODIC INSTRUMENTS)Code No. 035

CLASS IX

Theory	2 hours	25 Marks
Practical		75 Marks

THEORY

68 PDS.

1. An outline history of Indian Music.
2. Definition of the following :

Sangeet, Nada, Swara, Shuddha, Vikrit (Komal, Teevra) Sthana (Mandra, Madhya, Tara), Aaroha Avaroha, Raga, Laya, Tala, Sama, Tali, Khali, Matras, Avartana.

PRACTICAL

202 pds.

1. Proficiency in any one of the following instruments :
 - (i) Sitar, (ii) Sarod, (iii) Violin, (iv) Dilruba or Esraj (v) Flute (vi) Mandolin, (vii) Guitar.
2. (a) The tune of National Anthem.
(b) Four light Dhuns and four folk dhuns of different regions.
3. Aaroha, Avaroha, Pakad and Drut gat in the following Ragas; Yaman Bhairav, Bhopali with few Todas.
4. The recitation of Thekas of Teen Taal, Keharwa, Dadra and Jhaptal, taal keeping with hand beats.

CLASS X

Theory 2 hours 25 Marks
Practical 75 Marks

THEORY

68 pds

1. Basic knowledge of the structure and tuning of any one of the following instruments :
(i) Sitar, (ii) Sarod, (iii) Violin, (iv) Dilruba or Esraj, (v) Flute, (vi) Mandolin, (vii) Guitar.
2. Knowledge of the Notation systems laid down by Pt. Vishnu Digamber Paluskar and Pt. V.N. Bhatkhande.
3. Vadi, Samvadi, Anuvadi, Vivadi, Alap.
4. Brief description of Natya Shastra, Sangeet Ratnakar.

PRACTICAL

202 pds.

1. Eight Tala-baddha Alankaras set to different Talas.
2. Aaroha, Avaroha, Pakad and Drut gat in the following Ragas : Kafi, Khamaj, Sarang and Desh with simple elaborations and few Todas.

Suggested Reference Books :

1. 'Sitar Marg (I Part) by Shri S. Bandyopadhyaya, Vani Mandir, Subzi Mandi, Delhi-7.
2. 'Vitat Vadya Shiksha', by Shri S. Bandyopadhyaya, Vani Mandir, Subzi Mandi, Delhi-7.
3. Sitar and its Technique by Prof. Debu Chaudhuri, Avon Publishers, Shahdara, Delhi.

(III) HINDUSTANI MUSIC (PERCUSSION-INSTRUMENTS)

CODE NO. 036

CLASS IX

Theory 2 hours 25 Marks
Practical 75 Marks

THEORY

68 pds.

1. An outline history of Indian Music.
2. Definition of the following :
Sangeet, Nada, Swara, Shuddha, Vikrit (Komal, Teevra) Raga, Laya, Tala, Matra, Vibhag, Sama, Tali Avartana, Dugun, Tigun, Chaugun.

PRACTICAL**202 pds.**

To acquire efficiency in playing on the opted percussion instrument (Tabla or Pakhawaj) with special reference to accompaniment.

1. Ability to recite with hand beats and to play on the instruments the Theka of Teen Taal, Kaharwa, Dadra, with simple elaborations.
2. Accompaniment with solo performance.

CLASS X**Theory****2 hours****25 Marks****Practical****75 Marks****THEORY****68 pds.**

1. Basic knowledge of the structure and tuning of the instruments (Tabla or Pakhawaj).
2. Knowledge of the Notation systems laid down by Pt. Vishnu Digamber Paluskar and Pt. V.N. Bhatkhande.
3. Definition of Avartan, Theka, Lahera, Amad, Mohra, Tihai.
4. Brief description of Natya Shastra, Sangeet Ratnakar.

PRACTICAL**202 pds.**

1. To produce correctly the basic Bolas - Ta, Dha, Tin and Dhin, Dha, Ki, Na, Ti, Dhi, Dhi, Na and Ti; Ti, Na, Dhi, Dhi, Ga, Tir, Kit, Tu, Na, Katta, etc.
2. Ability to recognise the tala of the composition being sung or played on a melodic instrument.
3. To recite the tala with hand beats and to play on the instrument the Theka of Jhaptala, Rupak and Ektala with elaborations.

Suggested Reference Books :

1. 'Tal Sastra' by Shri Bhagwat Sharan, Sangit Hathras.
2. Tabla Vadan Shiksha by Pt. Krishna Rao Shankar Pandit.

(IV) CARNATIC MUSIC (VOCAL) CODE NO. 031**CLASS IX****Theory****2 hours****25 Marks****Practical****75 Markss****THEORY****68 pds.**

1. Knowledge of the following terms :

Sangita, Naada, Swara, Svarsthana, Arohana, Avarohana, Aavarta, Sruti, Taala, Laya, Alankara, Sthayi, Graha or Eduppu, Dhaatu, Maatu or Degrees of Speed, Anya Svava, Suddha Svava, Vikrta, Svava, Sangati, Poorvaanga, Uttaranga, Vaadi Samvaadi, Anuvaadi, Vivaadi, Samam, Atita, Anaagata, Raaga.

2. Outlines of Raaga, Lakshanaas of the following :
Maayaamaalavagowla, Sankaraabharanam, Kharaharapriya, Hamsadhvani.
3. Lakshanaas of the following musical forms :
Gitam, Svarajati, Varnam.
4. Basic knowledge of the following Taalas :
Aadi, Roopakam, Chaapu.
5. An outline history of Indian Music, including the biography of Purandaradaasa and Tyaagaraaja.

PRACTICAL

202 pds.

1. Community Singing :
 - (a) National Anthem
 - (b) Five folk or tribal songs of any region indicating time of the year and occasion with which they are related.
2. Voice-culture exercises for Sruti Suddha and Sthana Suddha.
3. The following ragas with descriptive details :
Maayaamaalavagowla, Sankaraabharanam, Kharaharapriya, Hamsadhvani.
4. Singing of simple, Devarnaamaas and Tiru Pugazh to the accompaniment of Tambura and Mridangam.
5. Soolaadi Sapta Talas and Chaapu Talas.

Suggested Reference Books :

South Indian Music Publishing Home : Volumes I, II, III & IV by Prof. P. Sambamoorthy.

CLASS X

Theory	2 hours	25 Marks
Practical		75 Marks
	THEORY	68 pds.

1. Raaga Lakshana outlines of the following :
Mohanam, Kalyaani, Kaambhoji, Bhairavi.
2. Lakshanas of Keertana and Kriti.
3. Outlines knowledge of the seventy-two Melakarta Scheme
4. Basic Knowledge of the structure and tuning of the Tambura.
5. Principles of Notation in Karnataka music.

PRACTICAL

202 pds.

1. Community Singing :
Four devotional songs, simple Naamaavalis, Bhajans composed by the saints/poets of India.
2. The following ragas with descriptive details :
Mohanam, Kalyaani, Kaambhoji, Bhairavi.
3. To create proper sense of svara and laya through sapta tala alankaaras. Alankaaras in Moyaamaalava gowla and other simple scales.
4. Divyanaama keertanas and simple kritis, to the accompaniment of Tambura and Mridangam.
5. Principles of notation in Carnatic music, illustrated with suitable examples.

(V) CARNATIC MUSIC (MELODIC INSTRUMENTS) CODE NO. 032

CLASS IX

Theory	2 hours	25 Marks
Practical		75 Marks
	THEORY	68 pds.

1. Knowledge of the following terms :
Sangita, Naada, Swara, Svarsthana, Arohana, Avarhana, Aavarta, Sruti, Sthayi, Graha or Eduppu, Dhaatu, Maatum Sama, Kaala of Degrees of Speed, Suddha Svara Vikrta, Svara, Sangati Poorvaanga, Uttaraanga, Vaadi, Samvaadi, Anuvaadi, Vivaadi, Atita, Anaagata, Anya svara.
2. Raaga, Lakshanaas Outlines of :
Maayaamaalavagowla, Sankaraabharanam, Kharaharapriya, Hamsadhvani.
3. Lakshanaas of the musical forms geetam, svarajati and Varnam.
4. Taalas : Aadi, Roopakam and Chaapu.
5. An outlines history of Indian Music including the biography of Purandaradaasa and Tyaagaraaja.

PRACTICAL

202 pds.

1. Any one of the following instruments :
1. Veena 2. Violin 3. Flute 4. Gothuvadyam
2. The candidates for instruments may be allowed to opt for community singing or for instrumental ensemble based either on the ragas from the syllabus or light and folk melodies.
3. Sapta Tala Alankaras in simple scales.
4. Playing ragas in detail on the instrument as prescribed in Theory.
5. Musical compositions :
Two geetams, one svarajati and one Adi Tala Varnam in two degrees of speed.

CLASS X

Theory	2 hours	25 Marks
Practical	THEORY	75 Marks
		68 pds.

1. Basic knowlege of the structure and tuning of the instrument opted for.
2. Outline knowledge of the seventy-two Melakarta Scheme.
3. Principles of Notation in Karnataka music.
4. Raaga Lakshana of Mohanam, Kalyaani, Kaambhoji, Bhariavi.
5. Lakshanas of the musical forms keertanam and Kriti.

PRACTICAL

202 pds.

1. Playing of the ragas prescribed for Theory.
2. Tuning the instrument.
3. Musical composition : Ata tala Varnam in two degrees of speed.
4. Simple keertanams and simple kritis.

Suggested Reference Books :

1. Flute by Prof. Sambamoorthy.
2. Musical Instrument of India by S. Krishnaswamay.

(VI) CARNATIC MUSIC (PERCUSSION - INSTRUMENTS) CODE NO. 033

CLASS IX

Theory	2 hours	25 Marks
Practical	THEORY	75 Marks
		68 pds.

1. Knowlege of the following terms :
Sangita, Naada, Swara, Svarasthana, Arohana, Avarohana, Aavarta, Sruti, Sthayi, Graha or Eduppu, Dhaatu, Maatu, Sama, Kaala or Degrees of Speed, Suddha Svava Vikrta, Svava, Sangati, Poorvaanga, Uttaranga, Vaadi, Samvaadi, Anuvaadi, Vivaadi, Atita, Anaagata, Anya svava.
2. Raaga, Laksanaas Outlines of :
Maayaamaalavagowla, Sankaraabharanam, Kharaharapriya, Hamsadhvani.
3. Lakshanaas of the musical forms geetam, Svarajati and Varnam.
4. Taalas : Aadi, Roopakam and Chaapu.
5. An outline history of India Music including the biography of Purandaradaasa and Tyaagaraaja.

PRACTICAL

202 pds.

1. To acquire proficiency in playing on the Mridangam both for Solo and Accompanying purposes. Also to learn to handle a few other percussion instruments, such as the Ghatam, the Kanjeera and the Moresing.
 1. To participate in community singing.
 2. Stress to be laid on creating and developing proper sense of rhythm.
 3. To recite “Sollukattus” for the different taalās.

CLASS X

Theory

2 hours

25 Marks

Practical

75 Marks

THEORY

68 pds.

1. Knowledge of the structure and tuning of the instrument.
2. To produce correctly and clearly the Sollukattus on the instrument opted for the technicalities related to them.
3. Principles of Notation in Karnataka music.
4. Lakshanas of the musical forms keertanam and Kriti, also ragas Mohanam, Kalyaani, Kaambhoji, Bhairavi.
5. Basic knowledge of the principles of performance as presented in Vocal and Instrumental music.

PRACTICAL

202 pds.

1. To play precisely, the Sollukattus in different degrees of speed.
2. Tuning of the instrument.
3. Ability to play the Thekas and Mohras in Adi tala, Rupaka tala and Chaapu talas.
4. To play brief toni–aavartams in simple taalās.

Suggested Reference Books :

1. ‘Percussion Instruments & Laya Vadyas’ Prof. P. Sambamurti.
2. ‘Mridanga Svabodhini’ by M.R. Durairaj.

(B) PAINTING (CODE NO. 049)

CLASS IX

One paper	3 hours	100 Marks	270 Periods	
(i)	Still Life Study		50	190
	Study of a group of two or three arranged objects from a fixed point of view in colour. Group may include, vegetables, foliage and objects of daily use.			
(ii)	Sketches from Life and Nature in Pencil and Ink.		20	80
(iii)	Submission of portfolio consisting of five selected works done during the year.		30	

CLASS X

One paper	3 hours	100 Marks	270 Periods	
	Painting from Memory.			
	Simple composition in (water/poster/pastel) colours on given subjects based on sketching from life.			

(C) COMMERCE

Note : Any one of the following three areas can be offered :

- I. Elements of Business
- or
- II. Elements of Book Keeping and Accountancy.
- or
- III. Typewriting-English or Hindi

(I) ELEMENTS OF BUSINESS (CODE NO. 154)

Objective : The objective of this paper is to provide elementary knowledge of the different aspects of business.

CLASS IX

One paper	3 hours	100 Marks	270 Periods	
I.	<i>Introductory</i> : Meaning and scope of business		05	12
II.	<i>Channels of distribution</i> : Types and functions of wholesaler and retailers.		20	
III.	<i>Course of Business Transactions</i> : Buying and selling of goods, methods of approaching customers; enquiries and quotations; price list, tenders, estimates and firm offers,			

	general terms of sale, quality, price, packing, delivery, transfer of ownership and payments; preparing of invoice Debit note and Credit note	20	54
IV.	<i>Mercantile Agents</i> : Kinds of agents and their functions, commission agents, factor and broker, Del Credere agents, bought note and sold note, Preparation of Account sales.	20	54
V.	<i>Warehousing and storekeeping</i> : Meaning, purpose, functions and kinds	15	42
VI.	<i>Transportation of goods</i> : rail, road, sea and air transport, comparative merits.	20	54
VII.	Insurance : General Principles of Insurance-Elementary exposure		

CLASS X

One paper	3 hours	100 Marks	Periods
I.	Office Routine : Different departments of Business establishment, handling inward and outward mail, Filing and indexing methods, copying and duplicating methods.	20	54
II.	Business Correspondence : Essential and forms of a good business letter, writing of simple business letters of enquiry, quotations, order, reference, advice and complaints.	20	54
III.	Banks : Functions of a Bank, Kinds of account and their operation; bank drafts, traveller's cheques, Post Office Saving Bank.	20	54
IV.	Negotiable Instruments : Nature, kinds of cheques, endorsement, crossing, dishonouring of a cheque.	20	54
V.	Bills of Exchange : Kinds, parties, negotiation, endorsing, dishonouring, Promissory notes and Hundies.	20	54

OR

(II) ELEMENTS OF BOOK-KEEPING AND ACCOUNTANCY (CODE NO. 254) CLASS IX

One paper	3 hours	100 Marks	270 Periods
	<i>Objective</i> : The main objective of this paper is to enable the student to understand the fundamental principles and to develop skills of preparing and maintaining simple accounts books, and records from given details.		
I.	<i>Introduction</i> : Need for Book-keeping, Objectives and advantages of Book-keeping.	14	38

II.	<i>Basic concepts</i> : Dual aspect of transactions and the accounting equation, Effect of transaction on Accounting equations, Business entity concept.	14	38
III.	Nature of Accounts and Rules for debit and credit : Classification of accounts, Rules for debit and credit, Preparation of vouchers and supporting documents	14	38
IV.	<i>Journal</i> : Need for journal; Journal entries; Subsidiary books.	14	38
V.	Ledger : Definition and importance; Relation between journal and ledger; Meaning of posting, guiding rule for posting transactions, balancing of accounts.	14	38
VI.	<i>Recording and posting of cash transactions</i> : Necessity of cash book–types of cash books–petty cash books and imprest system, journal proper.	15	40
VII.	<i>Trial balance</i> : Purpose, methods and limitations.	15	40

CLASS X

One paper	3 hours	100 Marks	270 Periods
I.	Final Accounts : Preparation of Trading and Profit and Loss Account and Balance Sheet of a sole trader with simple adjustments.	20	54
II.	Bank Reconciliation Statement : Utility and preparation; preparation of Cash Book with discount and Bank columns	20	54
III.	<i>Bills of Exchange</i> : Nature and use of bills of exchange and promissory notes; Recording transactions pertaining to drawing, discounting, retiring, dishonouring and renewing of bills of exchange	20	54
IV.	<i>Errors and their Rectification</i> : Types of errors and entries for their rectification	20	54
V.	<i>Depreciation</i> : Objects and methods-Straight line and Diminishing balance methods	20	54

(III) TYPEWRITING—(ENGLISH OR HINDI) CODE NO. 354

Due to speedy industrialisation and rapid means of communication, the use of labour saving devices is on the increase. Typewriting is one of the most commonly used labour saving devices even in remote towns. Its relevance is more pronounced in developing countries, where other sophisticated labour saving devices are not available. CBSE has decided to include the subject “Typewriting-English or Hindi” as an additional (optional) at the secondary level. This step has made the Scheme of Studies job oriented and need based.

Objectives

- To help the learner understand the mechanism of the typewriter.
- To enable the learner understand methods of typewriting.
- To help the learner know the symbols used in proof-correction.
- To enable the learner acquire the skills of proper display of matter like margin setting, centering and tabulation.
- To help the learner acquire skills of typing and cutting stencils with speed and accuracy.

CLASS IX

One Theory paper	2 hours	25 Marks	68 pds
Knowledge of Key Board			
Methods and Principles of Typewriting.			
Touch system of Typewriting			
Knowledge about mechanisation of the Typewriter – Its different parts.			
Maintenance of Typewriter			

One Practical paper	1 hour	75 Marks	202 pds.
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1. **Speed Test** (15 words per minute)

Marks : 30

Time : 10 minutes

(A simple passage of about 150 words in English or 120 words in Hindi. The same passage to be repeated if finished before time)

2. **Accuracy Test**

Marks : 45

Time : 40 Minutes

(A simple passage of about 400 words in English or Hindi @ 10 w.p.m.)

CLASS X

One Theory paper	2 hours	25 Marks	68 pds
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- Functions of important parts of Typewriter
- Elementary knowledge about display of letters and tabulation-margin setting, centering, headings. Subheadings
- Knowledge of cutting stencils and use of correcting fluid.
- Simple proof correction symbols.
- Standard abbreviations.
- Speed development exercises.

One Practical paper **1 hours** **75 Marks** **202 pds.**

A. Running Matter - A Speed & Accuracy Test

Marks : 30 Time : 10 minutes

(A Passage of 300 words @ 30 w.p.m. in English and 250 words @ 25 w.p.m. in Hindi. The same passage to be repeated, if finished before time)

B. Tabulation Test

Marks : 45 Time : 40 minutes

(A Tabular statement having not more than 3-4 times columns horizontally and vertically. The same is applicable for Hindi Typewriting also)

OR

Letter Typing

Marks : 45 Time : 40 minutes

(Typing a simple letter in English or in Hindi of around 200 words)

NOTE: Ten minutes time is allowed in between for adjustment of typewriters and starting of the above job (s).

(D) HOME SCIENCE (CODE NO. 064)

CLASS IX

One Theory paper **3 hours** **75 marks**

One Practical paper **3 hours** **25 marks**

Theory **marks**

Unit I: **Concept and Scope of Home Science.** 5

Unit II: **Family-a unit of society** : Type & size of family; reasons for change in family types, effect of size on welfare of its mebmbers, role of family members in its smooth functioning.

Unit III: Food and its relation to health : Definition of food, health, nutrition, nutrients and balanced diet, functions of food 10

- (i) energy giving
- (ii) growth and repair
- (iii) protection against diseases
- (iv) regulation of body functions
- (v) psychological satisfaction
- (vi) sociological function
- (vii) Inter relationship between food and health.

Unit IV:	Methods of cooking : boiling, steaming pressure cooking, frying, roasting & baking-brief description of each & suitability for foods.	10
Unit V :	Functions of a home : protective and social characteristics of functional house-security, light, ventilation, sanitation (brief description of disposal of waste water, garbage and human excreta) & surroundings	10
Unit VI:	Safety in the house : prevention of accidents in the kitchen and bathroom-cuts, falls, burns, electric shock, poisoning, safe use of fuels; first-aid given to cuts, bruises burns, scalds, poisoning, shocks & bites.	10
Unit VII:	Fabrics available in the Market : Definition of fibre and yarn; classification of fibre on the basis of origin and length; yarn making, blends, construction of fabric-weaving (different types of weaves-plain, twill and satin), felting and knitting; characteristics of fibres-length, durability, absorbancy, heat conductivity resilience & elasticity; effect of heat, moth and mildew, acids and alkalis	14
Unit VIII:	Selection of clothes : factors affecting selection	
	(i) fabric related factors (characteristics of fibre, fabric construction)	
	(ii) person related factors-age, occupation occasion, fashion, figure, comfort	
	(iii) Other factors-climate & cost	6

CLASS IX

Practicals : 20 + 5 (sessional work)	25
1. Observe your own family for - type, size & role of each member. Record the activities of all members on any one typical day of the family.	
2. observe food preparation using different methods and record taste, texture, colour of ready food.	
3. Prepare food using different methods of cooking.	
4. Study your own house for light ventilation, disposal of waste water and surroundings and record your observations.	
5. Study your house for measures of safety against accidents and give suggestions for improvement.	
6. Practice giving first aid to cuts, burns, fevers, scalds and bites.	
7. Collect samples of fabrics available in the market and present a comparative picture on the basis of cost (optional), durability, appearance and suitability.	
8. Identification of fabric-physical appearance and burning test.	

CLASS X

One Theory paper	3 hours	75 Marks
One Practical paper	3 hours	25 Marks

Theory

Unit I:	Principles of growth and development of child; growth and development of children between birth to 3 years . Important milestones in physical, motor, social emotional and language development of children, Physical, social and emotional needs of children.	10
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Unit II :	Role of books , music, rhymes, games, radio, TV & Video, in the life of a child upto 3 years of age.	4
Unit III :	Play : Meaning, need and types of play in children between birth & 3 yrs; Characteristics of play-active, passive, natural, serious and exploratory Play materials for children - Characteristics of play material.	5
Unit IV :	Nutrients : Functions, sources and deficiency of Carbohydrates, Proteins, Fats Minerals-Iron, Calcium and Iodine and Vitamins-Vitamin A, B, B2, Vitamin C and Vitamin D. Loss of nutrients during cooking, conservation and enhancement of nutrients.	7
Unit V :	Meal Planning : Concept, need and factors affecting meal planning-age, sex, climate, occupation, physical needs, number of family members, economic status of family, availability of food, family traditions, likes and dislike and occassion; Food Groups (Basic: 5 suggested by ICMR); Use of food groups in planning balanced diet, food allowances suggested by ICMR.	6
Unit VI :	Food hygiene & methods of storage of food : Rules of hygienic handling of food Method of storage of perishable, semi-perishable and non-perishable foods.	6
Unit VII :	Resource available to family : Types of resources - Human (Energy, time, knowledge and skill) Non-Human (money, material goods and community resources); general characteristics of resources, wise use of resources; Personal & shared:	6
Unit VIII :	Money Management : Family income and expenditure and importance of saving & Investment	6
Unit IX :	Consumer Education : Consumer rights and responsibilities, consumer problems. malpractices of traders-price variation, poor quality, adulteration, faulty weights and measures, non-availability of goods, misleading information, lack of standardised products, misleading advertisement, aids to help consumers-standardisation marks, labels, packages, advertisement, Pamphalets & Leaflets.	6
Unit X :	Care of clothes : Cleaning and finishing agents used in everyday care of clothes in the homes: stain removal (precautions and methods); laundering and storage of cotton, silk, wool and synthetics.	14
Unit XI :	Quality check of apparel : Workmanship of readymade, tailor made garment, reading of lables on clothes.	5

CLASS X

Practicals : 20 + 5 (sessional work) = 25

1. Observe and record physical and motor characteristics of a child at any given stage between 0-3 yrs of age.
2. Observe play activities of children between 1-3 years of age. Record their interests and characteristics of play materials.
3. Make a suitable play object for a child between 0-3 yrs.
4. Prepare dishes using methods of enhancement of nutrients.

5. Prepare useful household items recycling waste materials.
6. List any five malpractices you have observed in the market.
7. Practice basic stitches, -tacking, running, hemming and back stitch.
8. Remove common stains-curry, paint, ball pen ink, lipstick, blood, rust, tea & coffee.
9. Launder and finish cotton, silk, wool and synthetic articles.
10. Examine quality of a stitched garment.
11. Read lable on a ready made garment.

Note : Students are required to maintain record of practical work undertaken in the academic session.

References :

1. Home Science by Staff of Lady Irwin College Published by Longmans, New Delhi.
2. Despatches 1-6 (secondary Course) prepared published & Marketed by National open school. B-31-B, Kailash Colony, New Delhi-48.

ADDITIONAL LANGUAGES

Any one from the following other than the ones offered under the compulsory group:

Hindi, English, Assamese, Bengali, Bhutia, Gujarati, Kannada, Kashmiri, Limboo, Lepcha, Marathi, Malayalam, Manipuri, Oriya, Punjabi, Sindhi, Tamil, Telugu, Urdu, Sanskrit, Arabic, Persian, French, German, Russian, Spanish, Nepali, Portuguese, Tibetan and Mizo.

Note : Syllabi and text books of these languages will be the same as given for the respective languages under the Compulsory Languages Group in Vol. II of this curriculum.

*Please refer to the Scheme of studies for further details

(E) INTRODUCTORY INFORMATION TECHNOLOGY

(CODE No. 165)

Computer has permeated in every walk of life. CBSE has taken first step towards Information Technology sensitivity. It has included the subject INTRODUCTORY INFORMATION TECHNOLOGY as an additional (optional) at the secondary level. This subject offers scope for computer-added learning. It also facilitates developing a generation of knowledge workers.

Learning Objectives

General :

1. To familiarize with basics of information technology
2. To develop basic skills of using tools for word processing, presentation and database management
3. To appreciate use of IT in various domains

Specific :

1. Cognitive domain : Knowledge and understanding
To develop basic understanding of IT system operations and information accessing tools
2. Psychomotor domain : Skills
To develop skills in using tools of word processor, to manage database, to make graphs, to analyse reports using spreadsheets and to develop web pages.
3. Affective domain : Personality traits
To develop habit of teamwork and structured presentation.

CLASS IX

Unitwise Periods/weightage - theory and Practicals

Unit	Topic	Period		Marks	
		Theory	Practical	Theory	Practical
1	IT Basic	08	00	10	00
2	IT Tools	30	60	30	30
	Windows	(8)	(15)		
	MS-Office				
	* MS-Word	(8)	(15)		
	* MS-Power Point	(8)	(15)		
	* MS-Excel	(6)	(15)		
3	IT Application	02	20	00	30
	Total	40	80	40	60

One Paper

Time: $2\frac{1}{2}$ hours

Marks : 40

THEORY

Unit 1: IT BASICS

Convergence of Technologies:

Computer System:

Characteristics of a computer, Basic applications of a computer, Components of a computer system-Central Processing Unit (CPU), Visual Display Unit (VDU), Keyboard;

Concept of Memory:

Primary and Secondary Memory, RAM and ROM, Units of Memory-Byte, Kilobyte, Megabyte, Gigabyte, Terabyte Input/Output Devices:

Mouse, Joy Stick, Scanner, Microphone, OCR, MICR, Light pen, Bar code Reader, Digital Camera, Printer, Speaker, Plotter.

Storage Devices :

Computer languages :

Machine Language, Assembly Language and High level Languages, Role of Assembler and Compiler.

Types of software :

System, Utility and Application software with examples

Communication Technology :

Need for networking, LAN, MAN, and WAN,

Data Communication Device : Modem,

Introduction to Internet.

Content:

Data, Information and multimedia;

UNIT 2: IT TOOLS

MS-Windows:

Basic concept of an Operating System and its functions.

Introduction to Windows: Using Mouse and moving icons on the screen, My Computer, Recycle Bin, Task Bar, Start-menu and menu selection, running an application, Setting system date and time; Windows Explorer to view files, folders and directories, creating and renaming of files and folder, Opening and Closing of Windows, Minimise, Restore and Maximise forms of windows, Basic components of a Window: Desktop, Frame, Title Bar, Menu Bar, Status Bar, Scroll Bars (Horizontal and Vertical), Using right button of the Mouse, Creating Shortcut, Basic Windows Accessories: Notepad, Paint, Calculator, Wordpad, using Clipboard;

MS-OFFICE

MS Word:

Introduction to a Word Processor, Creating and Saving a document, Editing and Formatting a Document; Text Style (B, I.U.), Font Type Size, changing color, alignment of text; Formating paragraphs with line or paragraph spacing; adding headers and footers numbering pages, using grammar and spell check utilities, using subscript and superscript, inserting symbols, Print Preview, Printing a document.

Inserting WordArt, Clipart and Pictures, Page Setting, Bullets and Numbering, Borders and Shading, Format Painter, Find and Replace, Inserting Tables:

inserting, deleting-rows and columns, merging cells, splitting cells, using autoformat: Mail Merge

MS Power Point:

Introduction to Presentation Graphics, Understanding the concept of Slide Shows, Basic elements of a slide, Different types of Slide Layouts, Creating and saving a Presentation, Different views of a slide: Normal view, Slide Sorter view and Slide Show, Editing and Formatting a slide: Adding Titles, Subtitles, Text Background, Watermark; Headers and Footers, Numbering Slides;

Inserting pictures from files, Animating pictures and Text with Sound Effects, Timing Text box, Pictures and Slides, Rehearse Timings, ungrouping and Grouping pictures from Clipart.

MS Excel:

Introduction to Spreadsheets, Concept of Worksheets and workbooks, Creating and Saving a worksheet, Working with a spreadsheet: entering numbers, text, date/time, series using Auto Fill, Editing and formatting a worksheet including changing colour, size, font, alignment of text, Inserting or Deleting cells, rows and columns, Formulae-Entering a formula in a cell, using operators (+,-,*,./) in formulae, Relative referencing, Absolute referencing and mixed referencing, Printing a worksheet.

Use simple Statistical functions: SUM(), AVERAGE(), MAX(), MIN(), IF(), (without compound statements); inserting tables in worksheet, Embedding Charts of various types: Line, Pie, Scatter, Bar and Area in a worksheet.

UNIT 3: IT APPLICATIONS

Students are suggested to work on the following areas using MS-Word, MS-Power Point and MS- Excel on topics implementing the tools covered in the course.

Domains:

Documentation:

* Informal letter

* Formal letter

* Report Writing

* Greeting card

* Poster making

Presentation:

* School Magazine

* Environment and Pollution

* Product Advertisement

* Any topic specific from text book (any subject)

Analysis Reporting:

* Cricket Record

* Weather Report

* School/Class Result

NOTE:

Sample documents/presentations/spreadsheets on the above topics are made available on CBSE CD-ROM

Teachers are requested to demonstrate some other popular software for word processing, presentation, and spreadsheet, which support Hindi and/or some other Indian language(s).

[Lead Office is an example of Office suite (word processor with an interface to Ms-Office, Lotus Smartsuite, Pagemaker, Corel Draw etc.) with complete support to Indian language]

**CLASS IX
PRACTICALS**

Practical Paper	Examination Duration	Marks	Period in year
One	4 Hours	60	80

(A) HANDS ON EXPERIENCE (4 Exercises) 30 Marks

Design of a Practical Question Paper

Instructions on the basis of syllabus, distribution of marks and conduction of practical examination have been provided. The examiner is advised to set the question paper according to the prescribed curriculum and distribution of marks.

I	Windows Operating system	6 Marks
II	MS Word	8 Marks
III	MS Excel	8 Marks
IV	MS Powerpoint	8 Marks

I WINDOWS operating system:*

To test some of the following basic system operations on file/folder(s):

- Create
- Rename
- Copy/Cut/Paste
- Delete
- Commands related to Notepad/Wordpad/Paint
- Using Clipboard

II. MS Word:*

A Paragraph in MS Word incorporating some of the tools given below to be tested during the examination

- Editing and Formatting text and paragraph.
- Page and Paragraph Setup
- Inserting pictures and WordArt

III. MS Power Point:*

A Power Point presentation with 2/3 slides using some of the tools given below to be tested during the examination:

- Editing and formatting slides
- Inserting pictures and sounds
- Animating pictures and text with sound effects

IV. MS Excel:*

A Problem in spreadsheet related to some of the tools given below to be tested during the examination:

- Formatting cells and data
- Functions & formulae (Relative, absolute and Mixed reference)
- Charts

* Printouts of the documents(s) should be attached with the answer sheet

(B) IT Application Report File

20 Marks

Students are supposed to make a IT Application Report File Containing Real life assignments/presentations using MS Word, MS Power Point and MS Excel on at least 15 topics from the domain:

- At least 5 documents of MS Word
- At least 5 presentations of MS Power Point
- At least 5 spreadsheets of MS Excel with graphs

(C) VIVA VOCE

10 Marks

CLASS X

Unitwise Periods/ Weightage-Theory and Practicals

Unit	Topic	Period		Marks	
		Theory	Practical	Theory	Practical
1	IT Basics	08	05	10	05
2	IT Tools	17	30	30	30
	MS-Office				
	* MS-Access	(05)	(10)	(10)	(10)
	HTML	(12)	(20)	(20)	(20)
3	IT Application	00	15	00	25
	Total	25	50	40	60

One Paper

Time: 2 hours

Marks : 40

THEORY

UNIT 1: IT BASICS

Internet : World Wide Web, Web servers, Web sites, Web Pages, Web Browsers, HTML, Web address, Email address, URL, HTTP.

Services available on Internet: Information Retrieval, Electronic Mails, Locating sites using search engines and finding people on the net, Chat, Video Conferencing, FTP, Downloading and Uploading files from or to remote site, Newsgroup.

UNIT 2: IT TOOLS

MS-Office

MS Access:

Basic Concepts and need for a database, Creating a database, Setting the Primary Key, Entering data into a database, Inserting and deleting fields, Inserting and deleting Records, **Data Validation:** Field Size, Default Value Validation Rule, Validation Text, Required, Allow Zero Length.

HYPERTEXT MARKUP LANGUAGE

Basic Concept of Web Browsers with emphasis on popular browsers Internet Explorer and Netscape Navigator.

HTML Fundamentals:

Introduction to Web Page Designing using HTML, Creating and saving an HTML document, Elements in HTML Container and Empty elements, Designing web pages using the following elements:

HTML, HEAD, TITLE, BODY (Attributes: BACKGROUND, BGCOLOR, TEXT, LINK, ALINK, VLINK, LEFTMARGIN, TOPMARGIN), FONT (Attributes: COLOR, SIZE, FACE),

BASEFONT (Attributes: COLOR, SIZE, FACE), CENTER, BR (Break), HR (Horizontal Rule, Attributes: SIZE, WIDTH, ALIGN, NOSHADE, COLOR), COMMENTS, ! for comments, H1.. H6 (Heading), P (Paragraph), B (Bold), I (Italics), U (Underline), UL & OL (Unorder List & Ordered List Attributes: TYPE, START, LI (List Item), Insertion of images using the element IMG (Attributes : SRC, WIDTH, HEIGHT, ALT, ALIGN)

Internal and External Linking between Web Pages: Significance of linking, A-Anchor Element (Attributes: NAME HREF, TITLE, ALT)

UNIT 3: IT APPLICATIONS

Students are suggested to work on the following areas using Access and HTML on topics implementing the tools covered in the course.

Domains:

Database

- * Personal Data Management System
- * Employee Payroll
- * Stock Inventory

Website Designing

- * Travel and Tourism
- * Rural India
- * Environment and Pollution

NOTE

I. Sample documents/presentations on the above are made available on CBSE CD-ROM

II. Teachers are requested to demonstrate some other popular software for word processing. Presentation, Spreadsheet, Database Management, system which support Hindi and/or some other Indian language(s)

(Leap Office is an example of Office suit with Indian Language support)

III. Students are suggested to prepare some document/presentations of their IT Application report file in India Language(s).

CLASS X PRACTICALS

Practical Paper	Examination Duration	Marks	Period in year
One	4 Hours	60	80

(A) HANDS ON EXPERIENCE (2 Exercises)

30 Marks

Design of a Practical Questions Paper

There is no pre-set questions paper provided by CBSE for conducting practical examination. This flexibility has been provided to give more freedom to the examiners for the improvement of practical examination, keeping in view the resources and other facilities available in the laboratory of the School. However, detailed instructions

on the basis of syllabus, distribution of marks and conduction of practical examination have been provided. The internal examiner and the external examiner together set the question paper according to the prescribed curriculum and distribution of marks.

I.	MS ACCESS	8 MARKS
II.	HTML	22 MARKS

I. MS Access :*

A Problem in MS Access related to some of the tools given below to be tested during the examination:

- Creating and entering data into a database
- Setting the primary key
- Data Validation

II. HTML*

A Problem on Web Page designing (Minimum 2 pages) to be given which will cover some of the following HTML elements:

- <HTML>, <HEAD>, <TITLE>, <BODY>
- Font Styles: , <i>, <U>
- -FACE, SIZE
- <CENTER>
- <P>-ALIGN
- <A>
-
- Comments: <!-->

The students are supposed to know the tools and style for designing domain specific webpages from real life applications and the topic mentioned in the syllabus

Breakup of marks (HTML)

- Visual Effect: 8
- Linking : 4
- Coding : 10

* Printouts of the documents(s) should be attached with the answer sheet

(B) IT APPLICATION REPORT FILE

20 Marks

Students are supposed to make a IT Applications Report File Containing Real life assignment/presentations using MS Access and HTML on topic from the domain:

Must have print outs of the following:

- Documents of MS Access (At least 5)

- HTML source code along with browser view (At least 10)

(C) VIVA VOCE

10 Marks

The questions can be asked from any portion of the syllabus covered during Class IX and Class X.

NOTE-Teachers are suggested to give first-hand demonstration covering the aspects as: Connecting to internet, Using popular Search Engines, Web Browsing, Opening E-mail accounts, Sending and Receiving E-mails, Downloading files and pictures.

Infrastructure

Following minimum infrastructure requirement is suggested keeping in view of the existing infrastructure

Software:

- * WIN 96+
- * MS-Office 95+
- * Leap Office 2000
- * Netscape Navigator
- * Internet Explorer

Minimum Hardware requirement:

- * 486 Multimedia Machine
- * 16 MB RAM
- * 4.3 GB HDD

Internet connection:

- * TCP/IP

Student Machine ratio: 2 : 1

Teacher's Qualification:

- * Graduate (B.Sc. Comp)
- * Graduate with 'A' Level
- * Graduate with PGDCA (minimum 1 and half years) from a recognized institute/university

Magazine/Journal/Video Film

- * PC Quest

- * Chip
- * PC World
- * Computer@home
- * Computer Today
- * Microsoft training software
- * C-DAC's ADIT course material

Reference Books

1. Using Microsoft Office '97-The fast and easy to learn by Ed Bott (PHI)
2. Teach Yourself/ HTML 4 in 24 hours, by Dick Oliver and Molly Holzchlag (Second edition), SAMS Publishing
3. Learn MS Power Point 7.0 or windows 95 in a day by BPB Publications
4. Teach Yourself Microsoft Power Point '97 in 24 hours by Alexndria Haddad and Christopher Haddad, SAMS Publishing, Techmedia.
5. Learn MS Word 7.0 for Windows '95 in a day, BPB Pubications
6. Learn MS Access 7.0 for Windows '95 in a day Russell A Stultz, BPB Publication
7. Learn MS Excel 7.0 for Windows '95 in a day, BPB Publications
8. CD-ROM CBSE, DELHI

8. SUBJECTS OF INTERNAL ASSESSMENT

Evaluation of Work Experience/Pre-vocational Education, Art Education and Physical & Health Education will be done by the schools. CBSE has developed guidelines for internal assessment in these subjects which the schools are expected to keep in view while organizing teaching and evaluation of these subjects. Following publications of the Boards are recommended for their use and reference which give outlines of syllabi and hints for evaluation :

- (i) Work Experience in Schools : Guidelines & Syllabus - Revised edition 1991
- (ii) Art Education in Schools.
- (iii) Physical & Health Education in Schools.
- (iv) Guidelines for School based evaluation.

Recommended Book :

“Health” Published by Frank Brothers & Company Publisher Ltd., Darya Ganj, New Delhi