

CARNATIC MUSIC (VOCAL) THEORY (Code No. 031)
Syllabus for Class - IX

Periods : 135

Marks : 25

- I. Brief history of Carnatic Music with special reference to Saint Purandara dasa, Annamacharya, Bhadrachala Ramadasa, Saint Tyagaraja, Muthuswamy Dikshitar, Syama Shastry and Swati Tirunal.
- II. Definition of the following terms :
Sangeetam, Nada, raga, laya, tala, dhatu, Mathu, Sruti, Alankara, Arohana, Avarohana, Graha (Sama, Atita, Anagata), Svara - Prakruti & Vikriti Svaras, Poorvanga & Uttaranga, Sthayi, vadi, Samvadi, Anuvadi & Vivadi Svara - Amsa, Nyasa and Jeeva.
- III. Brief raga lakshanas of Mohanam, Hamsadhvani, Malahari, Sankarabharanam, Mayamalavagoula, Bilahari, Khamas, Kharaharapriya, Kalyani, Abhogi & Hindolam.
- IV. Brief knowledge about the musical forms.
Geetam, Svarajati, Svara Exercises, Alankaras, Varnam, Jatisvaram, Kirtana & Kirti.
- V. Description of following Talas :
Adi - Single & Double Kalai, Roopakam,
Chapu - Tisra, Misra & Khanda and Sooladi Sapta Talas.

CARNATIC MUSIC (VOCAL) Theory (Code No. 031)
Format of Written Examination for Class - IX

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|----|--|-----------------|
| | | 25 Marks |
| 1. | Long Answer (Essay) | |
| | a. Biography | 05 Marks |
| | b. Musical Forms | 05 Marks |
| | Short Answers with Examples | |
| | c. Writing of minimum three Raga-lakshana from prescribed list in the syllabus. | 05 Marks |
| | d. Description of talas, illustrating with examples. | 05 Marks |
| | e. Short notes of minimum 05 technical terms from the topic II. | 05 Marks |
| | Note : Examiners should set atleast seven questions in total and the students should answer five questions from them, including two Essays, two short answer and short notes questions based on technical terms (topic-II) will be compulsory. | |

CARNATIC MUSIC (VOCAL) Practical (Code No. 031)
Syllabus for Class - IX

Periods : 405

Marks : 75

- I. Vocal exercises - Svaravalis, Hechchu and Taggu Sthayi, Alankaras in three degrees of speed.
- II. Simple Geetams - Two Pillari Gitams, two Sadharana Geetams or Sanchari Geetams.
- III. Simple Svaraatis in Khamas and Bilahari raga.
- IV. Four Adi tala Varnams in two degrees of speed.
- V. 6 Keertanas in the ragas prescribed.
- VI. Swarajnanam test in the prescribed ragas and learnt compositions.
- VII. Signing of one Devarnama, one Patriotic song, one Tiruppugazh and one folk song.

CARNATIC MUSIC (VOCAL) Theory (Code No. 031)
Format of Practical Examination for Class - IX

Marks : 75

- | | | |
|----|---|----------|
| 1. | Questions based on vocal exercises in three degrees of speed. | 10 Marks |
| 2. | Geetam - At least two from the syllabus | 10 Marks |
| 3. | Questions based on Swarajatis taught. | 10 Marks |
| 4. | Singing of Varnams in two degrees of speed. | 15 Marks |
| 5. | Questions based on Keertanas learnt. | 20 Marks |
| | a. Rendering of Kirtana | |
| | b. Swarajnanam test | |
| | c. Details of the ragas | |
| 6. | Singing of one or two item from the topic VI | 10 Marks |

CARNATIC MUSIC (VOCAL) THEORY (Code No. 031)
Syllabus for Class - X

Periods : 135

Marks : 25

- I. Brief knowledge of Raga classification.
- II. Brief knowledge of scheme of 72 Melakarta.
- III. Knowledge of Ragas Prescribed - Suddha Dhanyasi, Sriranjani, Suddha Saveri, Bhairavi Keeravani, Kambhoji, Ananda Bhairavi.
- IV. Detailed knowledge of Kriti with explanation of decorative angas, Varnams - Tana Varnam & Pada Varnam.
- V. Rudiments of notation & writings of notations of Varnamas and Geetams.
- VI. Life and contribution of the following 20th Century Composers :
 - a. Kotisvara Iyer
 - b. Papanasam Sivan
 - c. Balamurali Krishna
 - d. G.N. Balasubramaniam
 - e. Lalgudi Jayaraman

CARNATIC MUSIC (VOCAL) Theory (Code No. 031)
Question Format for Class - X

25 Marks

1. Knowledge of writing notations of varnams & Gitams (Compulsory)
2. Knowledge of Ragas prescribed (compulsory)
3. Long Answer (Essay) 72 Melakarta Scheme.
4. Long answer (Essay) Classification of Ragas.
5. Long Answer (Essay) Based on the musical formas prescribed.
6. Short Answer or short notes based on whole syllabus.
7. Life and contribution of anyone composer mentioned in topic-VI.

Note : Question paper should contain at least seven questions, out of which candidates are expected to answer five in all. In which questions based on Notation & Raga-lakshanas are compulsory. All questions carry equal marks.

CARNATIC MUSIC (VOCAL) Practical (Code No. 031)
Practical Format for Class - X Examination

Marks : 75

1. Singing of Alankaras and Swara Exercise in a raga other than Mayamalava Goula in three degrees of speed. 10 marks
2. Rendering of at least four Varnams learnt in two degrees of speed. 20 marks
3. Question based on kriti. 20 marks
 - a. Rendition of Kriti learnt in Adi, Roopak and Chapu talas.
 - b. Swaragyanam test based on the compositions learnt.
4. Short bout of Kalpana Swaras in 1st speed for the compositions mentioned in the syllabus. 10 marks
5. Any one item from Topic IV 05 marks
6. Tuning of Tanpura. 10 marks

CARNATIC MUSIC (VOCAL) Theory (Code No. 031)
Practical Syllabus for Class - X Examination

Marks : 75

- I. Singing of Alankaras and Svaravalis in a Raga other than Mayamalavagaula.
- II. Rendering of taught Varnams (at least four) in two degrees of speed.
- III. Eight Kritis in total using Adi tala, Rupaka and Chapu Tala and at least one in slow tempo Adi tala.
- IV. At least one Devarnama, Bhajan, Tiruppugazh, Patriotic song and one folk song.
- V. Svarajnanam test based on the prescribed ragas and taught compositions.
- VI. Singing Svarakalpana in first speed for the compositions taught in Mohanam, Hamsadhvani, Kharaharapriya, Sankarabharanam, Suddha Saveri, Kalyani and Suddha Dhanyasi.

**CARNATIC MUSIC Melodic Instrument - Practical (Code No. 032)
Syllabus for Class - IX**

Periods : 405

Max. Marks : 75

- I. Introduction of Svara exercises and Sapta Tala alankaras in two speeds.
- II. Learning of 02 Pillari Geetams, 02 Sadharana Geetams/Sanchari Geetams, 01 Swarajati, 02 Adi Tala Varnams in one speed.
- III. Brief outline of Ragas - Mayamalavagoula, Kalyani, Kharaharapriya, Sankarabharanam, Hamsadhvani, Mohanam & Suddha Dhanyasi.
- IV. Basic techniques and construction of any one of the chosen instrument.
 - a. Violin
 - b. Veena
 - c. Flute
 - d. Mandolin
- V. Rendering of any two of the following :
 - a. Devotional Song
 - b. Folk Song
 - c. Patriotic Song

**CARNATIC MUSIC Melodic Instrument - Practical (Code No. 032)
Format for Practical Examination for Class - IX**

Max. Marks : 75

- I. Questions based on the rendering of Swara Exercises and Sapta Tala alankaras in two speeds. 15 marks
- II. Questions based on Gitams, Swarajati and Varnam 20 marks
- III. Brief explanation of Ragas from the syllabus. 15 marks
- IV. Questions based on the chosen instrument. 10 marks
- V. Rendering in part or full of the compositions from the topic V. 10 marks
- VI. Reciting the Sahitya or lyric of the compositions learnt. 05 marks

CARNATIC MUSIC Melodic Instrument - Theory (Code No. 032)
Syllabus for Class - IX

Periods : 135

Max. Marks : 25

- I. Brief history of Carnatic music with special reference to Saint Purandara Dasa, Saint Tyagaraja, Muthuswamy Dikshitar, Syama Sastry, Swati Tirunal, Annamacharya and Bhadrachala Ramadasa.
- II. Brief lakshanas of the following ragas :
 Mayamalavagoula, Kalyani, Sankarabharanam, Hamsadhavani, Mohanam, Kharaharapriya and Suddha Dhanyasi.
- III. Definitions of the following terms :
 Sangeetam, Nada, Arohana, Avarohana, Dhatu, Mathu, Sruti, Sthayi, Alankara, Poorvanga, Uttaranga Laya - Vilamba, Madhya, Dhruva, Svara - Suddha & Vikrita, Raga, Tala, Graha - (Sama, Atita, Anagata), Anya Svara.
- IV. Knowledge of Musical Forms :
 Svaravalis - Sarali, Jantai, Dattu, Hechchusthayi - Taggu Sthayi, Alankaras, Geetam and Svarajati.
- V. Ability to describe the following Talas :
 Adi, Roopakam and Sooladi Sapta Talas
- VI. Notation of Gitams in Rupaka and Triputa Tala.

CARNATIC MUSIC Melodic Instrument - Theory (Code No. 032)
Format for Examination for Class - IX

Max. Marks : 25

- I. Notation of any one Gitam 5 marks
- II. Brief lakshanas of any one of the ragas learnt. 5 marks
- III. Life and contribution of any one composer from the syllabus 5 marks
- IV. Brief description of two musical forms from the syllabus 5 marks
- V. Ability to describe any tala from the syllabus 5 marks
- VI. Brief description about the construction of any chosen melodic instrument 5 marks
- VII. Short notes of not less than five technical terms from the syllabus 5 marks

Note : Examiners should set minimum seven questions based on the pattern given above and the candidates are expected to answer five questions in all.

**CARNATIC MUSIC Melodic Instrument - Theory (Code No. 032)
Syllabus for Class - X**

Periods : 135

Max. Marks : 25

1. Raga classification in General.
2. Raga lakshanas of Suddha Saveri, Sriranjani, Kambhoji, Abhogi, Nata, Hindolam and Hari Kambhoji.
3. Writing notations of Adi tala Varna in two speeds and Kirtanas set in Adi and Rupaka tala.
4. An outline knowledge of 72 Melakartas.
5. Detailed knowledge of musical forms Kriti, Kirtana, Jatisvaram and Varnam.

**CARNATIC MUSIC Melodic Instrument - Theory (Code No. 032)
Format for the Examination for Class - X**

Max. Marks : 25

- I. Long answer - Briefly write the Raga classification in general.
- II. Writing the scheme of 72 Melakarta in detail.
- III. Knowledge of writing detailed description about any one musical forms mentioned in topic V.
- IV. Writing Ragalakshanas briefly about any one of the Raga mentioned in topic II.
- V. Knowledge of writing notation of Adi Tala Varna or any Kirtana covered in syllabus.

Note : Examiners should set at-least seven questions in total and the students should answer five questions from them, including essay, short answers including Ragalakshana, Musical Forms etc. Topic number II & III are compulsory.

CARNATIC MUSIC Melodic Instrument - Practical (Code No. 032)
Syllabus for Class - X

Periods : 405

Max. Marks : 75

- I. Four Adi tala Varnam in two speeds.
- II. Six Keertanas in the prescribed ragas - Sriranjani, Suddha Saveri, kambhoji, Abhogi, Nata, Hindolam and Harikambhoji.
- III. At-least one Jatisvaram and one Svarajati.
- IV. Explanation of the details of the ragas prescribed.
- V. Tuning of the instrument opted for.
- VI. Reciting the Sahitya of the compositions learnt.

CARNATIC MUSIC Melodic Instrument - Practical (Code No. 032)
Format of the Examination for Class - X

Max. Marks : 75

- | | | |
|------|---|----------|
| I. | Playing any part of the Varnam learnt in two speeds | 15 marks |
| II. | Rendering of the Keertanas from the prescribed syllabus | 18 marks |
| III. | Questions based on jatiswaram and Swarajati learnt | 10 marks |
| IV. | Explanation of Raga details prescribed | 10 marks |
| V. | Tuning of Instrument opted for | 12 marks |
| VI. | Reciting the Sahitya (or) Lyric for the compositions learnt | 10 marks |

CARNATIC MUSIC Percussion - Theory (Code No. 033)
Syllabus for Class - IX

Periods : 135

Max. Marks : 25

1. Definition of the following terms :
 Tala, Laya, Avartana, Kala, Kaala, Graha (Atita - Anagata - Sama), Nada, Sangeetam, Svara, Sthay Raga, Alankara, Arohana, Avarohana, Uttaranga and Purvanga.
2. Brief history of Carnatic music with reference to Purandara Dasa, Tyagaraja, Muthuswamy, Dikshitar and Syama Sastry.
3. Basic knowledge of opted instrument.
4. Description and writing notation of sollukattus in Adi, Rupakam and chapu talas (all varieties).
5. Brief lakshanas of musical forms - Geetam Svarajati, Varnam.

CARNATIC MUSIC - Percussion Theory (Code No. 033)
Format for Theory Examination for Class - IX

Max. Marks : 25

1. Life and contribution of any one of the composers mentioned in topic II. 5 marks
2. Construction and playing techniques of opted percussion instrument 5 marks
3. Writing in notation, the Sollukattus for Adi/Roopakam/Chapu Talas 5 marks
4. Briefly explaining the lakshanas of any one of the Musical Term from topic V 5 marks
5. Writing short - notes on five technical terms from the syllabus 5 marks

Note : Examiner should give internal choice for all the question set up.

**CARNATIC MUSIC - Percussion Practical (Code No. 033)
Syllabus for Class - IX**

Periods : 405

Max. Marks : 75

1. Ability to recite Sollukattus for the prescribed talas with varieties and in at-least three speeds.
2. Ability to play Sollukattus (simple) in Adi, Rupaka and Chapu Tala varieties.
3. Reciting the Sapta Tala Alankaras in three degrees of speed.
4. Questions based on the construction and playing techniques adopted for Kanjira and Ghatam.
5. Basic technical knowledge adopted for Mridangam play and short bouts of accompanying in the format of Tattakaramas for Janta Svaras, Patterns, alankarams, geetam, svarajatis.

**CARNATIC MUSIC - Percussion Practical (Code No. 033)
Format for Practical Examination for Class - IX**

Max. Marks : 75

1. Reciting of Sollukattus for the prescribed talas with varieties at-least in three speeds. 15 marks
2. Ability to play simple Sollukattus for Adi, Roopaka and Chapu tala varieties. 15 marks
3. Reciting the Sapta tala alankaras in three degrees of speed. 15 marks
4. Questions based on the construction and playing techniques adopted in Khanjira and Ghatam. 10 marks
5. Ability to explain the special technical knowledge, employed in Mridangam and following it up with Tattakaram accompariment for Janta Svaras, Alankaras, Geetam and Swarajatis. 20 marks

CARNATIC MUSIC - Percussion Theory (Code No. 033)
Syllabus for Class - X

Periods : 135

Max. Marks : 25

- I. Knowledge about the structure and components of the instruments opted for.
- II. Playing techniques adopted for Sapta tala alankaras in three speeds.
- III. 16 Angas of Talas, Korvai, Koraippu etc.
- IV. Basic knowledge of Jaati and Gati Bhedas or Variations.
- V. A brief outline of different schools of playing Mridangam.
- VI. Life sketch and contribution of
 - a. Palghat Mani Iyer and
 - b. Plani Subramania Pillai
- VII. A short outline knowledge of principles of practical performance.

CARNATIC MUSIC - Percussion Theory (Code No. 033)
Format for Theory Examination for Class - X

Max. Marks : 25

- I. Illustration of the structure and components of the instruments with the help of a diagram.
- II. Explanation of the playing techniques adopted for Sapta Tala alankaras in three speeds.
- III. Knowledge of Shodasanga, Korvai, Kuraippu etc.
- IV. Knowledge of Jaati and Gati bhedas.
- V. Brief knowledge of different schools of Mridangam playing.
- VI. Knowledge of life and contribution of Palghat Mani Iyer and Palani Subramaniam Pillai.
- VII. Outline knowledge of principles of Practical Performance.

Note : Examiners can put seven questions from the above topics and the candidates should attempt five questions in all. All the questions carry equal marks.

CARNATIC MUSIC - Percussion Practical (Code No. 033)
Syllabus for Class - X

Periods : 405

Max. Marks : 75

- I. Knowledge of tuning Mridangam.
- II. To prepare and play Sollukattu for Adi, Rupaka, Triputa and Khanda Chapu talas.
- III. Accompaniment for musical form like Varnam, Kriti, jatiswaram, Padam and Tillana.
- IV. Knowledge to prepare Mohra and Morvai in Adi, Rupaka, Chapu and Triputa talas.
- V. Play “Tani Avartanam” for at-least 6 to 8 avartanas in simple talas.

CARNATIC MUSIC - Percussion Practical (Code No. 033)
Format for Practical Examination for Class - X

Max. Marks : 75

- I. Ability to tune Mridangam. 10 marks
- II. Ability to prepare and recite Sollukattu for Adi, Rupaka, Triputa and Khanda Chapu talas. 20 marks
- III. Knowledge about the way of accompaniment for musical forms like Varnam, kriti, Jatiswaram, Padam and Tillana. 15 marks
- IV. Preparation of Mohra and Korvai in Adi, Rupaka, Triputa and Chapu talas. 20 marks
- V. Ability to play “Tani Avartanam” for at-least 6 to 8 avartanas in simple talas. 10 marks

HINDUSTANI MUSIC VOCAL (Code - 034)
Examination Structure for Assessment Class IX

TOTAL: 100 Marks

Theory

Time: 03 hours

25 Marks

1. Five questions to be set with internal choice covering the entire syllabus.
2. Out of five questions, one question of composition in notation from the prescribed Ragas will be compulsory.
3. All the questions will carry five marks each.

Practical

75 Marks

Time: 15-20 Minutes for each candidate

1. Examiners are requested to ask the questions directly related to the syllabus.
2. Marks should be awarded in accordance with the marking scheme.

Distribution of Marks

Sr. No.	Value Points	Marks
1	Alankaras set to all prescribed Ragas and Talas	03
2	One Swarmalika and one Lakshan Geet	04x02=08
3	Aaroha, Avaroha, Pakad and Drut Khayal with few Aalaps and Tanas in each prescribed Raga	10x04=40
4	Identification of prescribed Ragas from the passages of Swaras rendered by the examiner	08
5	Any three of the following: i. National Anthem ii. National Song iii. Patriotic Song iv. Community Song v. Devotional Song vi. Folk or Tribal Song	02x03=06
6	Recitation of the Thekas of the prescribed Talas with dugun	02x05=10

HINDUSTANI MUSIC VOCAL (Code - 034)
Examination Structure for Assessment Class X

TOTAL: 100 Marks

Theory

Time: 03 hours

25 Marks

1. Five questions to be set with internal choice covering the entire syllabus.
2. Out of five questions, one question of composition in notation from the prescribed Ragas will be compulsory.
3. All the questions will carry five marks each.

Practical

75 Marks

Time: 20-25 Minutes for each candidate

1. Examiners are requested to ask the questions directly related to the syllabus.
2. Marks should be awarded in accordance with the marking scheme.

Distribution of Marks

Sr. No.	Value Points	Marks
1	One Vilambit Khayal with simple elaborations in prescribed Raga	12
2	Aaroha, Avaroha, Pakad and Drut Khayal with simple elaborations and few Tanas in each prescribed Raga	10x04=40
3	i. Devotional Song ii. Patriotic Song	02x02=04
4	i. Folk Song ii. Tribal Song	02½ x 02 = 05
5	Identification of prescribed Ragas from the passages of Swaras rendered by the examiner.	04
6	Recitation of the Thekas of the prescribed Talas with dugun	02½ x 04 = 10

HINDUSTANI MUSIC VOCAL (Code - 034) Class IX

TOTAL: 100 Marks

Theory

Time: 03 hours

25 Marks

1. Describe the following:
Sangeet, Dhvani, Nada, Shruti, Swara, Saptak, Thaata, Jati.
2. Define the following:
Raga, Aaroha, Avaroha, Pakad, Vadi, Samvadi, Anuvadi, Vivadi.
3. Describe the following:
Bandish, Sthai, Antara, Swarmalika, Lakshan Geet, Khayal.
4. Define the following:
Laya, Tala, Matra, Sam, Tali, Khali, Vibhag, Avartan.
5. An outline history of Hindustani Music of Modern period with special reference to the works of Pt. Vishnu Narayan Bhatkhande and Pt. Vishnu Digambar Paluskar.
6. Notation system of Pt. V. D. Paluskar and Pt. V. N. Bhatkhande.
7. Description of the following Ragas:
 - i. Alhaiya Bilawal
 - ii. Yaman
 - iii. Bhairav
 - iv. Kafi
8. Ability to do notation of compositions in prescribed Ragas.
9. Description and ability to do Tala-Notation of the following Talas:
Teentala, Ektala, Jhaptala, Keharwa, Dadra

Practical

75 Marks

1. Six Alankaras set to all prescribed Ragas and Talas.
2. One Swarmalika and one Lakshan Geet in each prescribed Raga.

3. Aaroha, Avroha, Pakad and Drut Khayal with few Alaps and Tanas in the following Ragas:
Alhaiya Bilawal, Yaman, Bhairav and Kafi.
4. Identification of prescribed Ragas from the passages of swaras rendered by the examiner.
5.
 - i. National Anthem
 - ii. National Song
 - iii. Patriotic Song
 - iv. Community Song
 - v. Devotional Song
 - vi. Folk or Tribal Song
6. Recitation of the Thekas of the following Talas with Dugun, keeping Tala with hand-beats:
Teentala, Ektala, Jhaptala, Kehrwa, Dadra.

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HINDUSTANI MUSIC
VOCAL (Code - 034) Class X

TOTAL: 100 Marks

Theory

Time: 03 hours

25 Marks

1. Define the following:
Aalap, Tana, Meend, Kan, Khatka, Murki
2. Describe the following:
Dhamar, Tarana, Thumri, Lokgeet
3. Origin and development of Dhrupad and Khayal.
4. Basic knowledge of the structure and tuning of Tanpura.
5. Detail study of the following Ragas:
 - i. Bhupali
 - ii. Khamaj
 - iii. Durga
 - iv. Des
6. Ability to do notation of compositions in prescribed Ragas.
7. Brief life sketch and contribution to music of Miyan Tansen, Sadarang and Ustad Faiyaz Khan.
8. Description and Tala - Notation of the following Talas with dugun:
Tilwada, Chautala, Sultala, Rupak.

Practical

75 Marks

1. One Vilambit Khayal with simple elaborations in any one of the prescribed Ragas.
2. Aaroha, Avaroha, Pakad and Drut Khayal with simple elaborations and few Tanas in the following Ragas:
 - i. Bhupali
 - ii. Khamaj
 - iii. Durga
 - iv. Des

3.
 - a. Devotional Song
 - b. Patriotic Song
4.
 - a. Folk song
 - b. Tribal Song
5. Ability to recognize the prescribed Ragas from the passages of Swaras rendered by the examiner.
6. Recitation of the Thekas of the following Talas with dugun, keeping Tala with hand-beats:
 - i. Tilwada
 - ii. Chautala
 - iii. Sultala
 - iv. Rupak

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HINDUSTANI MUSIC MELODIC INSTRUMENTS (Code - 035)
Examination Structure for Assessment Class IX

TOTAL: 100 Marks

Theory

Time: 03 hours

25 Marks

1. Five questions to be set with internal choice covering the entire syllabus.
2. Out of the five questions, one question of compositions in Notation from the prescribed Ragas will be compulsory.
3. All questions will carry Five Marks each.

Practical

75 Marks

Time: 15-20 Minutes for each candidate

1. Examiners are requested to ask the questions directly related to the syllabus.
2. Marks should be awarded in accordance with the marking scheme.

Distribution of Marks

Sr. No.	Value Points	Marks
1	Chalan set to all Ragas	06
2	Alankaras set to Ragas and Talas	04
3	Aaroha, Avroha, pakad, Drut gat with few Toads in each prescribed Raga	10x04=40
4	Identification of prescribed Ragas from the passages of swaras rendered by the examiners	08
5	Dhun and Folk Dhun	07
6	Recitation of Thekas of prescribed Talas with Dugun	02x05 =10

HINDUSTANI MUSIC MELODIC INSTRUMENTS (Code - 035)
Examination Structure for Assessment Class X

TOTAL: 100 Marks

Theory

Time: 03 hours

25 Marks

1. Five questions to be set with internal choice covering the entire syllabus.
2. Out of the five questions, one question of compositions in Notation from the prescribed Ragas will be compulsory.
3. All questions will carry Five Marks each.

Practical

75 Marks

Time: 20-25 Minutes for each candidate

1. Examiners are requested to ask the questions directly related to the syllabus.
2. Marks should be awarded in accordance with the marking scheme.

Distribution of Marks

Sr. No.	Value Points	Marks
1	One Maseet Khani Gat in Prescribed Raga	12
2	Aaroha, Avroha, Pakad, Drut Gat with few Todas and Jhala in each prescribed Raga	10x04 = 40
3	National Anthem on Instrument opted for	04
4	Dhun and Folk Dhun	05
5	Identification of prescribed Ragas from the passages of Swaras rendered by the examiners	04
6	Recitation of Thekas of prescribed Talas with Dugun	10

HINDUSTANI MUSIC MELODIC INSTRUMENTS (Code - 035)
Class IX

TOTAL: 100 Marks

Theory

Time: 03 hours

25 Marks

1. Describe the following:
Sangeet, Dhvani, Nada, Shruti, Swara, Saptak, Thaata, Jati.
2. Define the following:
Raga, Aroha, Avroha, pakad, vadi, Samvadi, Anuvadi, Vivadi.
3. Describe the following:
Gat, Sthai, Antara, Swarmalika, Lakshan Geet and Khayal
4. Define the following:
Laya, Tala, Matra, Sam, Tali, Khali, Vibhag, Avartan.
5. An outline history of Hindustani Music of modern period with special reference to the works of Pt. Vishnu Narayan Bhatkhande and Pt. Vishnu Digambar Paluskar.
6. Notation system of Pt. V.D. Paluskar and Pt. V. N. Bhatkhande
7. Description of the following Ragas:
Alhaiya Bilawal, Yaman, Bhairav, Kafi.
8. Ability to do notation of compositions in prescribed Ragas.
9. Description and ability to do Tala-Notation of the following Talas:
Teentala, Ektala, Jhaptala, Keharwa, Dadra

Practical

75 Marks

1. Six chalan set to all prescribed Ragas.
2. Eight Tala-baddha Alankaras set to all prescribed Ragas and Talas.
3. Aaroha, Avaroha, Pakad, Drut Gat with few Todas in the following Ragas:
Alhaiya Bilawal, Yaman, Bhairav, Kafi.
4. Identification of prescribed ragas from the passages of swaras rendered by the examiner.
5. a. Two Dhuns
b. Two Folk Dhuns
6. Recitation of the Thekas of Teentala, Ektala, Jhaptala, Keharwa, Dadra with Dugun, keeping Tala with hand beats.

HINDUSTANI MUSIC MELODIC INSTRUMENTS (Code - 035) Class X

TOTAL: 100 Marks

Theory

Time: 03 hours

25 Marks

1. Define the following :
Aalap, Tana, Meend, Kan, Khatka, Murki.
2. Describe the following:
Dhrupad, Dhamar, Thumri, Masitkhani Gat, Razakhani Gat, lok Dhun.
3. Origin and development of the instrument opted for.
4. 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		
5. Detailed study of the following Ragas:
Bhupali, Khamaj, Durga, Des
6. Ability to do notation of compositions in prescribed ragas.
7. Brief life sketch and contribution to music of Miyan Tansen, Ustad Allaudin Khan and Inayat Khan.
8. Description and Tala notation of the following Talas with Dugun.
Tilwada, Chautala, Sultala, Rupak.

Practical

75 Marks

1. One Maseetkhani Gat with simple Todas in any one prescribed ragas.
2. Aaroha, Avroha, pakad and Drut Gat with Tana and Jhala in the following ragas:
Bhupali, Khamaj, Durga, Des
3. Ability to play National Anthem on the instrument opted for.
4.
 - a. Two Dhuns
 - b. Two Folk Dhuns
5. Ability to recognize the prescribed Ragas from the passages of swaras rendered by the examiner.
6. Recitation of the Thekas of the following Talas with Dugun, keeping Tala with hand beats:
Tilwada, Chautala, Sultala, Rupak

HINDUSTANI MUSIC PERCUSSION INSTRUMENTS (Code - 036) Examination Structure for Assessment Class IX

TOTAL: 100 Marks

Theory

Time: 03 hours

25 Marks

1. Five questions to be set with internal choice covering the entire syllabus.
2. Out of the five questions, one question of compositions in Notation from the prescribed Talas will be compulsory.
3. All questions will carry five marks each.

Practical

75 Marks

Time: 15-20 Minutes for each candidate

1. Examiners are requested to ask the questions directly related to the syllabus.
2. Marks should be awarded in accordance with the marking scheme.

Distribution of Marks

Sr. no.	Value Points	Marks
1	Basic techniques and bols of Tabla or Pakhawaj.	07
2	Kayadas or Relas, Tihai Sadharan Tukras or Parans Chakradar Tukras or Parans Mukharas and Damdar Tihais in Teentala or Aditala.	10
3	Kayada or Rela, Paltas, Tihai Tukras or Parans in Jhaptala or Sultala	10
4	Advance Kayadas, Paltas, Tihai Tukras or Parans, Damdar and Bedamdar Tihais in Teentala or Aditala.	10
5	Thekas of Teentala or Aditala, Jhaptala or Sultala, Ektala or Chartala	08
6	Thekas of Ektala, Keharwa and Dadra	05
7	Variations of Thekas in prescribed Talas	05
8	Solo Performance	20

HINDUSTANI MUSIC PERCUSSION INSTRUMENTS (Code - 036)
Examination Structure for Assessment Class X

TOTAL: 100 Marks

Theory

Time: 03 hours

25 Marks

1. Five questions to be set with internal choice covering the entire syllabus.
2. Out of the five questions one question of compositions in Notation from the prescribed Talas will be compulsory.
3. All questions shall carry five marks each.

Practical

75 Marks

Time: 15-20 Minutes for each candidate

1. Examiners are requested to ask the questions directly related to the syllabus.
2. Marks should be awarded in accordance with the marking scheme

Distribution of Marks

Sr. no.	Value Points	Marks
1	Kayadas or Relas, Paltas, Tihai, Chakradar Tukras or Parans in Ektala or Chautala	15
2	Laggi in Keharwa and Dadra	05
3	Kayada or Rela, Chakradar Tukras or Parans in Jhaptala or Sultala	10
4	Adalaya Kayada or Rela, Farmaishi Chakradar, Gat, Stuti Parans in Teentala or Aditala	10
5	Thekas Teentala or Aditala, Jhaptala or Sultala Rupak or Tevra Ektala or Chautala	05
6	Kayadas , Paltas, Tihais, Relas, Tukras, Parans	05
7	Accompaniment with Bhajan and Geet	05
8	Solo Performance	20

HINDUSTANI MUSIC PERCUSSION INSTRUMENTS (Code - 036) Examination Structure for Assessment Class IX

TOTAL: 100 Marks

Theory

Time: 03 hours

25 Marks

1. Definition of the following:
Tala, Laya, Matra, Vibhag, Sam, Tali, Khali, Avartan, Theka, Kayada or Rela, Palta, Tihai, Tukra Chakradar, Mukhara and Paran.
2. Basic knowledge of own instruments (Tabla or Pakhawaj) its structure and its various parts.
3. Elementary knowledge of the origin of Tabla or Pakhawaj.
4. Elementary knowledge of various Gharanas of Tabla or Pakhawaj.
5. Notation system of Pt. V.N. Bhattachande and Pt. V. D. Paluskar.
6. Description and ability to do Tala Notation with Thah and Dugun Laya in Teentala, Jhaptala, Ektala, Keharwa and Dadra.
7. Notation of two Kayadas in Teentala with four Paltas and Tihai.
8. Ability to write Rela, Chakradar Paran and Mukhara in Tala Notation system.
9. An outline History of Hindustani Music of Modern Period with special reference to the works of Pt. V.N. Bhattachande and Pt. V. D. Paluskar.

Practical

75 Marks

Time: 15-20 Minutes for each candidate

1. Knowledge of basic techniques and bols of Tabla or Pakhawaj and ability to do combinations of syllabus.
2. Ability to play Four Kayadas or Rela with four paltas and Tihai. Two sadharan Tukras or Parans, Two Chakradar Tukras or Parans, Two Mukharas, Two Damdar Tihais in Teentala or Adi Tala.
3. Ability to play One Kayada or Rela in Jhaptala or Sultala with four paltas and Tihai, One Tukra or Paran and One Damdar Tihai.
4. Ability to play Two Advance Kayadas or Relas, Two Advance Chakradar Tukras or Parans, One Damdar and One Bedamdar Tihai in Teentala or Adi tala.
5. Ability to play Thekas of Teentala or Aditala, Jhaptala or Sultala, Ektala or Chautala with Thah and Dugun laya.
6. Ability to play Ektala, Keharwa and Dadra with two variations in Thah and Dugun Layas.
7. Ability to play variations of Thekas in prescribed Talas.
8. Solo performance at least 8-10 minutes in Teentala.

HINDUSTANI MUSIC PERCUSSION INSTRUMENTS (Code - 036)

Examination Structure for Assessment Class X

TOTAL: 100 Marks

Theory

Time: 03 hours

25 Marks

1. Define the following:
Farmaishi Chakradar, Gat and its varieties, Laggi & Laddi, Mukhara & Mohara.
2. Short notes on Graha, Marg and Kriya.
3. Origin and development of Tabla or Pakhawaj.
4. Study of Tripuskar Vadya with special reference to Natyashastra.
5. Salient feature of various Gharanas of Tabla or Pakhawaj.
6. Detail study of Delhi and Ajrada Gharana of Tabla or Kudau Singh Gharana of Pakhawaj.
7. Short notes on Farukhabad Gharana and Lucknow Gharana of Tabla or Nana Panse Gharana of Pakhawaj.
8. Ability to write: Kayada or Rela, Tukra, Farmaishi Chakradar and Gat or Paran in Teentala or Adi Tala and Jhaptala or Sultala with Tala Notation system.
9. Ability to write the Kayada or Rela in Ektala or Chautala with Tala notation system.
10. Ability to write the Thekas of Jhaptala or Sultala, Ektala or Chautala in Thah, Dugun and Chaugun laya.
11. Write one Kayada of Delhi Gharana in Teentala with Tala Notation system or Rela in Adi Tala.

Practical

75 Marks

Time: 15-20 Minutes for each candidate

1. Ability to play:
 - a. Two Kayads or Relas in Ektala or Chautala with four Paltas and Tihai.
 - b. Two Chakardar Tukras or Parans and one simple Tihai in Ektala or Chautala.
 - c. Two Laggis in Keharwa and One in Dadra Tala.
2. Ability to play two Kayadas or Rela, one Chakradar Tukra or Paran in Jhaptala or Sultala.
3. One Adalaya Kayada or Rela, Four advance Kayadas or Relas, One Farmaishi Chakardar and one Gat or Stuti Paran in Teentala or Aditala.
4. Ability to play varieties of Thekas in Teentala or Adi Tala, Jhaptala or Sultala, Rupak or Teevra and Ektala or Chautala.
5. Ability to play Kayada, Paltas, Tihai, Relas, Tukra, Paran, Chakardar in Teentala or Adi Tala, Jhaptala or Sultala, Ektala or Chautala.
6. Ability to do accompaniment with Bhajan and Geet.
7. Solo performance with lehara at least 08-10 minutes in Teentala or Adi Tala and 02-03 minutes in Jhaptala or Sultala.

(B) Painting Code No. 049
Class - IX

One Paper
3 Hours

270 Periods
100 Marks

Learning outcomes / Objectives :

Students opting painting as an additional subject are able to :

- Develop their aesthetic sense.
 - Appreciate the beauty in lines, forms and colours.
 - Understand the fundamentals of Visual Arts. (Elements and Principles) ability to apply them to a specific aesthetic intent.
 - Get the knowledge and skills in the use of basic tools, medium and techniques required to works from concept to finished product.
 - Develop memory and observation power through the study / exercise in still life and painting composition.
 - Develop their mental faculties for proper maintenance and arrangements of things in their painting practicals as well as in their life.
- i. Still life study
Study of a group of two or three arranged object from a fixed point of view in colours. Group may include, vegetables, foliage and objects of daily use.
 - ii. Simple composition based on any one form of folk Art / Tribal Art such as Madhubani, Warli, Alpana, Rangoli, Mandarna etc.
 - iii. Sketches from life and nature in pencil and Ink.
 - iv. Submission of portfolio consisting of five selected works done during the year.

Marking Scheme

100 Marks

- i. (a) Accurate drawing with proper composition of objects. (20)
(b) Compositional arrangement with due emphasis on the subject matter. (20)
- ii. Treatment of media (colours) with an appropriate colour scheme in still life one painting composition. (10)
- iii. Originality, Creativity and overall impression (10)
- iv. Sketches from life and nature in pencil and ink. (20)
- v. Submission of part-portfolio consisting of 10 selected works done during the year. (5 still-life and 5 painting-composition) (20)

(B) Painting (Code : 049)
Class - X

One Paper	270 Periods
3 Hours	100 Marks

*** Learning outcomes / objectives :**

Students opt painting as an additional subject are able to :

- Develop their aesthetic sense.
- Appreciate the beauty in line, forms and colours.
- Understand the fundamentals of visual Arts (Elements and Principles) ability to apply them to a specific aesthetic intent.
- Get the knowledge and skills in the use of basic tools, medium and techniques required to works from concept to finished product.
- Develop memory and observation power through the study / exercise in still life and painting composition.
- Develop their mental faculties for proper maintenance and arrangements of things in their Painting practicals as well as in their life.

Painting from memory

Simple composition in (Water / paster / pastel) Colours on given subjects based on sketching from life and nature. It may also be in abstract / semi-abstract / folk art forms.

Class - X

Marking Scheme :	100 Marks
i. Compositional arrangement with due emphasis on the subject matter.	(40)
ii. Treatment of media (colours) with appropriate colour scheme.	(30)
iii. Creativity, originality and overall impression.	(30)

Home Science (Code No. 064)
Class - IX (2017-18)

Course Structure: Theory & Practical

Theory : 75 Marks

Time: 3 Hrs.

Practical : 25 Marks

No.	Units	Marks	No. of Pd.
1	Concept and scope of Home Science Education and recent trends	03	05
2	Human growth & Development - I	10	25
3	Family and Values	08	20
4	Food, Nutrition and Health	17	45
5	Fiber and Fabric	15	34
6	Resource Management	15	34
7	Measures of Safety and Management of Emergencies	07	17
	Total	75	180
	Practical	25	40
	Grand Total	100	220

Unit I : Concept and scope of Home Science Education and recent trends **05 Pd**

- a) Concept of Home science
- b) Fields of Home Science
- c) Relevance of study of Home Science and career options
- d) Recent trends

Unit II : Human Growth & Development - I **25 Pd**

- a) Concept of growth and development
- b) Principles of growth and development
- c) Factors affecting growth and development (environmental and heredity)
- d) Age specific milestones (Birth to adolescence)

Unit III : Family and Values **20 Pd**

- a) Concept and types of family
- b) Role of family in Holistic development of an individual (Physical, Social, Psychological and spiritual)
- c) Ethical and value based society (need for happy family, respect and care for each member of family, Dignity of labour, work distribution within the family)
- d) Importance of Girl Child.

- e) Influence of various factors on a family : Globalisation, urbanisation, migration, technology and media.

Unit IV : Food, Nutrition and Health **45 Pd**

- a) Definition of food, nutrition, nutrient, Health and nutritional status.
- b) Food and its functions (Physiological, social and psychological)
- c) Nutrients : sources and functions
- d) Relationship of food, health and diseases
- e) Malnutrition : concepts and components (over nutrition and under nutrition)
- f) Concept of Balanced Diet
- g) Methods of cooking and processing
- Cooking methods : Dry methods, moist methods, combination methods
 - Processing methods : Germination, Fermentation, Mutual supplementation / Combination
 - Conservation of nutrients while cooking and processing

Unit V : Fibre and Fabric **34 Pd**

- a) Definition of Fiber and Yarn
- b) Classification of fiber on the basis of origin and length
- c) Characteristics of fibers : feel, appearance, colour fastness, length, strength, absorbency, shrinkage, elasticity, effect of heat and sunlight.
- d) Methods of construction of fabric - brief description of weaving, knitting and felting.
- e) Selection of fabric : Factors affecting selection of fabric (age, purpose, occupation, fashion, figure, climate, comfort and cost).

Unit VI : Resource Management **34 Pd**

- a) Resources : Definition and characteristics
- b) Types of resources (Human : Time, Energy, Knowledge and attitude
Non-Human : Money, materialistic goods and community resources)
- c) Waste Management - Need to refuse, reduce, reuse, repair and recycle waste.
- d) Proper disposal of kitchen waste (Biodegradable : Composting, Vermicomposting, biogas and bagass. Non Biodegradable : Inceneration, Land fills and recycle)

Unit VII : Measures of Safety and Management of Emergencies **17 Pd**

- a) Accident prone / Unsafe Zones at home
- b) Need of safety at home
- c) Measures of safety against burns, electric shocks, cuts, fractures, bites, poisoning
- d) First Aid : Concept and Importance

Practicals

40 Periods

25 Marks

[Distribution of Marks : 3 Marks per unit (Unit No. 2 - 7)]

- 1) Observation of motor skills in three year old child.
- 2) Behavioural changes in an adolescent through observation method among peer group.
- 3) Role of family members : collage / chart etc.
- 4) Design educational games specific to functions / sources of nutrients.
- 5) Identification and use of kitchen tools and appliances : at least any five e.g. refrigerator, cooking gas, mixer-grinder, microwave, smokeless chulas, pressure cooker etc.
- 6) Weights and measures : Equivalents / conversions of Ounce, gram, cup, teaspoon, tablespoon, how to use a kitchen weighing scale.
- 7) Identification of fruits, vegetables, spices, oils, sugars, cereals, and lentils.
- 8) Food processing method demonstration : Germination and Fermentation.
- 9) Collection and Identification of fabrics, physical and burning tests.
- 10) Take a case study of a house for disposal of kitchen waste and encourage segregation of biodegradable and non biodegradable waste, through creating slogans / posters etc.
- 11) Prepare a first aid kit and practice giving first aid for burns, cuts, bites, fractures, electric shocks. (group activity)
- 12) File work 4 Marks
- 13) Viva Voce 3 Marks

Home Science (Code No. 064)
Class - X (2017-18)

Course Structure: Theory & Practical

Theory : 75 Marks

Time: 3 Hrs.

Practical : 25 Marks

No.	Units	Marks	No. of Pd.
1	Human Growth & Development - II	13	30
2	Management of Resources	13	30
3	Food and Personal Hygiene	08	18
4	Meal Planning	15	42
5	Food Safety and Consumer Education	13	30
6	Care and Maintenance of Fabrics and Apparel	13	30
	Total	75	180
	Practical	25	40
	Grand Total	100	220

Unit I : Human growth & development II (30 periods)

- a) Play (0-5 years), role of play in growth & development of children. Types of play-active, passive, natural, serious and exploratory, selection of play material for children.
- b) Childhood. Adolescents and Adulthood : Special Features.
- c) Problems of Adolescents
- d) Old Age : Need of care

Unit II : Management of Resources : Time, Energy & Money (30 periods)

- a) Time Management - Definition & Importance
- b) Time plans - Factors affecting time plan
- c) Energy Management : Definition and Importance
- d) Fatigue and work Simplification
- e) Family Income & Types : Expenditure & Importance of Saving and Investment Schemes (Only Listing)

Unit III : Food & Personal Hygiene (18 periods)

- a) Principles of hygienic handling of food, including serving of food.
- b) Hygiene in kitchen
- c) Personal hygiene of food handler
- d) Hygiene during food storage

Unit IV : Meal Planning**(42 periods)**

- a) Concept of Meal Planning
- b) Factors affecting meal planning : age, sex, climate, occupation, cost of food items, number of family members, occasion, availability of food, family traditions, likes and dislikes
- c) Basic food groups
- d) Use of food groups in planning balanced diet, in context of self. RDA-ICMR (2010) and its uses in family diets
- e) Therapeutic adaptations of normal diet : Based on consistency and cooking methods

Unit V : Food Safety and Consumer Education**(30 periods)**

- a) Food Safety, mal-practices of traders, price variation, poor quality, Faulty weights and measures, non-availability of goods, misleading information, lack of standardized products
- b) Food adulteration : Concept, adulterants & harmful effects of adulteration, FSSAI Standards (2006)
- c) Consumer Rights and problems faced by consumer, redressal and rights (Listing)
- d) Sources of Consumer Education - Govt & Non-Govt. Agencies (Only listing)

Unit VI : Care and Maintenance of Fabrics and Apparel**(30 periods)**

- a) Cleaning and finishing agents used in routine care of clothes.
- b) Stain Removal
- c) Storage of cotton, silk, wool and synthetics
- d) Ready made garments, selection, need and workmanship

Practicals

40 Periods

25 Marks

(Distribution of Marks : 3 Marks per Unit)

1. Make suitable play material for children between 0-3 years (work in a pair)
2. Plan a balanced diet to self (only one meal).
3. Prepare a time plan to self for one day.
4. Prepare a report on any five mal practices you have observed in the market.
5. Undertake a market survey and collect five (5) food labels, analyze them and illustrate the labels.
6. Remove common stains of curry, paint, ball pen ink, grease, lipstick, tea and coffee.
7. List five areas of agreement and disagreement each with parents, siblings and friends, and present the solutions to class.
8. Examine positive & negative qualities of one readymade and one tailor made garment.
9. Prepare a care label for a readymade garment according to its fabric and design.
10. Practical File. 4 Marks
11. Viva Voce. 3 Marks

Home Science (Code No. 064)
Class - IX & X (2017-18)
Design of the Question Paper

The weightage of the distribution of marks over different dimensions of the question paper for classes IX & X shall be as follows :

Time: 3 Hrs.

Theory : 75 Marks

Practical : 25 Marks

A. Weightage of Content-Unit-Class : IX (2017-18)

No.	Units	Marks
1	Concept and scope of Home Science Education and recent trends	03
2	Human growth & Development - I	10
3	Family and Values	08
4	Food, Nutrition and Health	17
5	Fiber and Fabric	15
6	Resource Management	15
7	Measures of Safety and Management of Emergencies	07
	Total	75
	Practical	25
	Grand Total	100

B. Weightage of Content-Unit-Class : X (2017-18)

Time: 3 Hrs.

Theory : 75 Marks

Practical : 25 Marks

No.	Units	Marks
1	Human Growth & Development - II	13
2	Management of Resources	13
3	Food and Personal Hygiene	08
4	Meal Planning	15
5	Food Safety and Consumer Education	13
6	Care and Maintenance of Fabrics and Apparel	13
	Total	75
	Practical	25
	Grand Total	100

HOME SCIENCE (CODE NO. 064)
QUESTION PAPER DESIGN
CLASS-IX (2017-18), CLASS-X (2017-18)

S. No.	Typology of Questions	Learning Outcomes & Testing Skills	Very Short Answer (1 Mark)	Short Answer-I (2 Marks)	Short Answer-II (4 Marks)	Case Study and Picture based (3 marks)	Long Answer (LA) (5 marks)	Marks	%
1.	Remembering (Knowledge based Simple recall questions, to know specific facts, terms concepts, principles, or theories, Identify, define, or recite, information)	Reasoning Analytical skills Critical Thinking	3	1	1	-	-	09	12
2.	Understanding (Comprehension - to be familiar with meaning and to understand conceptually, interpret, compare, contrast, explain, paraphrase information)		1	1	1	-	1	12	16
3.	Application (Use abstract information in concrete situation, to apply knowledge to new situations. Use given content to interpret a situation, provide an example, or solve a problem.		1	2	2	-	1	18	24
4.	Higher Order Thinking Skills (Analysis & Synthesis - Classify, compare, contrast, or differentiate between different pieces of information, Organize and/or integrate unique pieces of information from a variety of sources)		1	2	2	-	1	18	24

5.	Creating, Evaluation and Multi- Creating, Evaluation and Multi-Disciplinary-(Generating new ideas, product or ways of viewing things Appraise, judge, and/ or justify the value or worth of a decision or outcome, or to predict outcomes based on values)		1	1	1	2	1	18	24
	Total Estimated Time		1(7) = 7	2(7) = 14	4(7) = 28	3(2) = 6	5(4) = 20	75	100

Note: No Chapter wise weightage, care should be taken to cover all chapters.

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Annual Training Camp: Junior and Senior Division

Rationale

- The Annual Training Camp is an exciting and essential element of NCC. Activities at the camp will help students develop qualities like social service, team spirit, challenge, leadership, discipline, self confidence, widen horizon, develop ambition to do creative work, enhance personal and social development, learn how to overcome adversity, civil defence & self defence, other new and exciting experiences.
- The Training Camp will make the students become more aware that they are a part of a greater ecosystem and are not bound by social customs and norms. In essence, students will be true to themselves and more able to see others as people regardless of class, colour and creed.
- Camp activities will lead students to self-reliance, self-confidence, national spirit and leadership, and will enhance the NCC aims of developing character, comradeship, discipline, secular outlook, spirit of adventure and the ideals of selfless service among the youth of the country.
- The Training Camp will let students live in the camp with a social environment and help teachers observe and understand their students' development in terms of personal aspirations, psychological behaviours and social skills. It will also allow students to appreciate their environment and natural surroundings and provide opportunities for students to be independent and exercise self-discipline.
- The Annual Training Camp is the culmination of NCC training instills and stimulates in youths an urge for excellence and inculcates a spirit of adventure and outdoor activities.

Objectives

- Attendance of ATC is a mandatory requirement before the cadet is eligible for A and B Certificate in case JD/JW and SD/SW respectively.
- ATC is conducted for duration of 10 days in the second year of JD/JW and SD/SW to provide outdoor practical trg.
- General activities covered during the ATC are as under :-
 - Physical fitness to include PT, Yoga, Games, Obstacle trgDrill
 - Weapon training and firing.
 - Map Reading
 - Field Craft and Battle Craft.
 - Personality development.
 - National Integration and Social awareness.
 - Cultural activities.

- Lectures on Civil Affairs, Social Awareness and Community Development, Health and Hygiene and environment issues.
- Cadets will be tested for practical training during the camp as under: -
 - Drill.
 - Weapon Training.
 - Firing.
 - Obstacle Training.
 - Map Reading.
 - Field Craft and Battle Craft.
- ATC will be conducted under the aegis of the unit affiliated to the school/college.
- ATC will be conducted during the period from August to February by the ANO and Cadets keeping in view the availability of cadets as per their academic /curricular schedule

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CLASS - X
ANNUAL TRAINING CAMP: JUNIOR DIVISION (ARMY)
(Block Syllabus)

S. No.	UNITS	MARKS	PERIODS
1	Physical Training, Games and Obstacle Training	4	12
2	Drill	8	16
3	WT and Firing	8	16
4	Map Reading	6	12
5	FC and BC	4	10
6	Military History	0	12
7	Personality Development	0	18
8	National Integration, Civil Affairs, Environment, Social Awareness and Community development, Health and hygiene	0	16
	Total	30	112

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ANNUAL TRAINING CAMP

Total Marks 30		Periods 112
Unit 1: Physical Training and Games	04 Marks	12 Periods
<ul style="list-style-type: none"> • Physical Training • Yoga • Games • Obstacle Training 		
Unit 2: Drill	08 Marks	16 Periods
<ul style="list-style-type: none"> • Words of Command • Drill Without Arms • Individual Drill • Squad Drill 		
Unit 3: Weapon Training	08 Marks	16 Periods
<ul style="list-style-type: none"> • Characteristics of 22 Rifle, Stripping, Assembling • Loading/Unloading And Bolt Manipulation • Lying position and Holding • Aiming, Range and Figure Target • Trigger Control and Firing a Shot • Range Procedure and Safety Precautions • Firing. 22 Rifle 		
Unit 4: Map Reading	06 Marks	12 Periods
<ul style="list-style-type: none"> • Introduction to Map and Conservational Signs • Prismatic Compass, use and introduction to GPS 		
Unit 5: Field Craft and Battle Craft	04 Marks	10 Periods
<ul style="list-style-type: none"> • Description of Ground • Judging Distance • Field Signal • Section Formation • Knots and Lashing • Observation, Camouflage and Concealment 		

Unit 6: Military History	00 Marks	12 Periods
<ul style="list-style-type: none"> • Biographies of Military Leaders • Indian Battles • Indian Army War Heroes • War Movies 		
Unit 7: Personality Development	00 Marks	18 Periods
<ul style="list-style-type: none"> • Factors Influencing/Shaping Personality-Physical, Social, Psychological and Philosophical • Self Awareness and Critical and Creative Thinking • Importance of Team Work, Communication Skills-Group Discussion • Character Building • Leadership Traits • Interview Skills • Time Management 		
Unit 8: National Integration and Social Awareness National Integration	00 Marks	16 Periods
<ul style="list-style-type: none"> • Unity in Diversity • National Integration and its Importance • Contribution of Youth to Nation Building 		

CIVIL AFFAIRS

DISASTER MANAGEMENT FIRE SERVICES AND FIRE FIGHTING VIGILANCE AWARENESS

- Civil Defence Organization and Its Duties
- Types of Emergencies/Natural Disasters
- Role of NCC during Natural Hazards
- Civil Administrative setup at District/Tehsil/Village

ENVIRONMENT AWARENESS

- Conservation of Environment and Ecology
- Pollution and its Control
- Wildlife Conservation

SOCIAL AWARENESS AND COMMUNITY DEVELOPMENT

- Drug Abuse and Trafficking
- HIV and AIDS-Causes and Prevention
- Cancer awareness
- Adult Education
- Traffic Control Organization
- Rural Development Programmes
- Civic Responsibilities
- Corruption
- Social Evils
- Child Abuse and Trafficking
- Female foeticide

HEALTH AND HYGIENE

- First Aid In Common Medical Emergencies
- Hygiene And Sanitation-Personal and Food Hygiene
- Preventable Diseases
- Physical and Mental Health

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CLASS - X
ANNUAL TRAINING CAMP: JUNIOR DIVISION (NAVY
 (Block Syllabus)

S. No.	UNITS	MARKS	PERIODS
1.	Physical Training, Games and Obstacle Training	4	16
2.	Drill	9	20
3.	Wt and Firing	4	8
4.	Naval Orientation	2	4
5.	Naval Communication	2	4
6.	Navigation	1	1
7.	Seamanship	6	11
8.	Ship and Boat Modelling	2	4
9.	Military History	0	8
10.	Personality Development	0	10
11.	National Integration, Civil Affairs, Environment, Social Awareness and Community Development, Health and Hygiene	0	16
12.	TEST	30	10
	TOTAL	30	112

ANNUAL TRAINING CAMP (Detailed Syllabus)

Total Marks	30	Periods	112
Unit 1: Physical Training and Games	04 Marks	16 Periods	
• Physical Training			
• Yoga			
• Games			
Unit 2: Drill	09 Marks	20 Periods	
• Words of Command			
• Drill With Arms			
• Individual Drill			
• Squad Drill			
• Ceremonial Drill			
Unit 3: Weapon Training	04 Marks	08 Periods	
• Characteristics of .22 Rifle			
• Loading/Unloading and Bolt Manipulation			
• Lying Posn and Hold			
• Aiming, Range and Figure Targets			
• Trigger Control and Firing a Shot			
• Range Procedure and Safety Precautions			
• Firing .22 Rifle			
Unit 4: Naval Orientation	02 Marks	04 Periods	
• Main Parts of a Ship			
• Survival and Rescue- Life Safety			
• Items on Board Ship, Life Raft			
• Life Boats and Distress signals			
Unit 5: Naval Communication	02 Marks	04 Periods	
• Semaphore, Use of Semaphore			
• Introduction of Various Letter			
• Position, Reading of Semaphore			
• Message, Transmission of Semaphore			

Unit 6: Navigation	01 Marks	01 Periods
<ul style="list-style-type: none"> • Uses of Maps and Charts and Its • Purpose, Introduction to Map • Reading and Navigation Aids to Include GPS 		
Unit 7: Seamanship	06 Marks	11 Periods
<ul style="list-style-type: none"> • Rigging, Cordage and Wire Ropes, Rope • Work Terms, Preparation Ropes for use, Bends and Hitches, Anchor and Anchor cable 		
Unit 8: Ship and Boat Modeling	02 Marks	04 Periods
<ul style="list-style-type: none"> • Reading of a Ship Drawing of a Model, Practical Training on Static Models viz Preparation of Hull • Construction of Super Structure, Chemical Work and Finishing of a Model and Stability and Operation of a Model 		
Unit 9: Military History	00 Marks	08 Periods
<ul style="list-style-type: none"> • Biographies of Military Leaders • Famous Battles 		
Unit 10: Personality Development	00 Marks	10 Periods
<ul style="list-style-type: none"> • Factors Influencing/Shaping Personality • Physical, Social, Psychological and Philosophical • Self Awareness and Critical and Creative Thinking • Communication Skills-Group Discussion • Importance of Team Work, Character Building, • Leadership Traits, Interview Skills • Time Management 		
Unit 11: National Integration, Civil Affairs Environment, Social Awareness & Community Development, health and Hygiene	00 Marks	16 Periods
<ul style="list-style-type: none"> • Unity In Diversity • National Integration and Its Importance • Contribution of Youth In Nation Building 		
Civil Affairs		
<ul style="list-style-type: none"> • Disaster Management 		

- Fire Fighting
- Vigilance Awareness
- Civil Defence Organization and Its Duties
- Types Of Emergencies / Natural Disasters
- Role Of NCC during Natural Hazards

Environment Awareness

- Conservation of Environment and Ecology
- Pollution and Its Control
- Wildlife Conservation

Social Awareness and Community Development

- Drug Abuse and Trafficking, HIV and AIDS
- Cancer Awareness, Adult Education
- Traffic Control
- Evils - Female Foeticide, Abuse, Dowry

Health and Hygiene

- First Aid in Common Medical Emergencies
- Hygiene and Sanitation
- Preventable Diseases
- Dressing of Wounds
- Physical and Mental Health

ELIGIBILITY CONDITIONS FOR CERTIFICATE EXAMINATIONS

‘A’ CERTIFICATE

1. All NCC cadets in Junior Division, on successful completion of their two years training and having passed Part `A` examination conducted by respective NCC units, are issued NCC `A` Certificate. The certificate examination comprises of a written and practical test. Cadets to be eligible to appear in the certificate examination must fulfill the following conditions.
 - (a) The cadet should be on the roll of NCC unit/sub unit.
 - (b) The cadet should have attended a minimum of 75% of total training periods laid down in the syllabus for the first and second years of Junior Division/ Wing, NCC (All Wings).
 - (c) Attended one Annual Training Camp of JD/JW.
 - (d) Break in the NCC training of the cadet prior to appearing in the examination

should not exceed more than 12 months at one time, to count his previous training period. In case the break exceeds 12 months and the cadet has been on the unit rolls for a minimum of two years before his discharge and had attended 75% of the total period during his NCC service; he/she will need another 45 periods in the year he/she is appearing for the examination.

NOTICE

1. NCC as an additional Subject will be available to those schools where NCC already exists. It will be available as per existing strength.
2. Schools wishful of applying for allotment of NCC must apply to the nearest NCC Unit and not to CBSE. NCC will be allotted as per seniority as per provisions of NCC Act and Rules, 1948.

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**(I) ELEMENTS OF BUSINESS (CODE NO. 154)
(2017-18)**

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

220 Periods

Unit		Marks	Periods
I	Introduction to Business	10	20
II	Trade and Auxiliaries to Trade	20	40
III	Forms of Business Organisations	25	40
IV	Transport	15	40
V	Banking	15	40
VI	Saving and Investment	15	40
	Total	100	220

	Contents	Learning Outcomes
I	Introduction to Business (a) Human activities Meaning and Types : Economic and Non-economic activities (b) Business activities : Meaning and Types : Industry and Commerce Business-meaning and features, E-business-Meaning, benefits and application (c) Not for profit organisations - meaning	The learner would be able to : <ul style="list-style-type: none"> ● Understand the meaning of human activities ● Differentiate between economic and non-economic activities ● Understand the meaning of business activities ● Explain the different types of business activities ● Give the meaning of industry and commerce ● Explain the concept of business ● Understand the meaning of e-business ● Appreciate the importance of e-business ● Give the meaning of not for profit organizations ● Differentiate between profit-making and not for profit organizations

II	<p>Trade and Auxiliaries to Trade</p> <p>(a) Trade-Wholesale and retail - meaning, functions of wholesaler and retailer.</p> <p>(b) Auxiliaries to trade : Insurance, transportation, warehousing, banking, communication and advertising - meaning.</p>	<p>The learner would be able to:</p> <ul style="list-style-type: none"> ● Give the meaning of trade and auxiliaries to trade ● Differentiate between the concepts of wholesale and retail trade ● State the functions of wholesaler and retailer ● Give the meaning of insurance, transportation, warehousing, banking, communication and advertising
III	<p>Forms of Business Organisations</p> <p>Sole proprietorship - meaning and features.</p> <p>Partnership-meaning and features.</p> <p>Hindu Undivided family-meaning and features.</p> <p>Company-meaning and features.</p>	<p>The learner would be able to:</p> <ul style="list-style-type: none"> ● Understand the concept of 'Forms of business organisations' ● Give the meaning of sole proprietorship, partnership and a company ● State the features of sole proprietorship, partnership and a company
IV	<p>Transport</p> <p>Rail, road, sea and air transport-features, advantages and limitations.</p>	<p>The learner would be able to:</p> <ul style="list-style-type: none"> ● Enumerate the different modes of transport ● Highlight the importance of transport business ● State the features of rail, road, air and sea transport ● Give transport the advantages of different modes of transport ● Give the limitations of different modes of transport
V	<p>Banking</p> <p>Commercial banks - meaning and functions</p> <p>Bank Deposit Accounts - types (Saving Accounts, Current Accounts, Recurring Accounts, Fixed Deposits)</p> <p>Opening and operating of Savings Bank Account</p>	<p>The learner would be able to:</p> <ul style="list-style-type: none"> ● Give the meaning of commercial banks ● Explain the functions commercial banks ● Differentiate between the different types of bank accounts ● Open and operate a savings bank account
VI	<p>Saving and Investment</p> <p>Sources of income, spending money wisely, need for savings, avenues of investments</p>	<p>The learner would be able to :</p> <ul style="list-style-type: none"> ● Give the meaning of savings ● Understand the need for savings ● Identify the different sources of income ● Make judicious use of income ● Identify the different avenues of investment

CLASS-X

One Paper

3 Hours

100 Marks

220 Periods

Unit		Marks	Periods
I	Company	15	40
II	Sources of Business Finance	15	40
III	Communication in Business Organisations	20	35
IV	Selling and Distribution	20	40
V	Large Scale Retail Trade	15	30
VI	Selling	15	35
	Total	100	220

	Contents	Learning Outcomes
I	Company Private and Public company : Meaning, Features and Difference Multinational companies : Meaning and Features	The learner would be able to : <ul style="list-style-type: none"> ● Recall the meaning of a company ● Understand the meaning of private and public company ● State the features of private and public company ● Give the meaning of a Multinational Company ● State the features of a Multinational Company
II	Sources of Business Finance Sole proprietor, partnership firm : sources Company : Owners funds and borrowed funds	The learner would be able to : <ul style="list-style-type: none"> ● Identify the need for business finance ● List the different sources of business finance ● Identify the sources of business finance for sole proprietorship, partnership firm and a company ● Distinguish between owners funds and borrowed funds
III	Communication in Business Organisations Meaning and methods : letter, e-mail, video conferencing, telephonic conversation	The learner would be able to : <ul style="list-style-type: none"> ● Recall the meaning of communication ● Mention the different modes of communication ● Distinguish between a letter and an email ● Distinguish between telephonic conversation and video conferencing

IV	<p>Selling and Distribution</p> <p>(a) Concept of purchase and sale</p> <p>(b) Types - Cash, Credit, Hire Purchase System and Installment Payment System</p> <p>(c) Documents used in the process of purchase and sale - quotation, invoice, debit note, credit note, accounts sales, delivery note</p>	<p>The learner would be able to :</p> <ul style="list-style-type: none"> ● Explain the concept of purchase and sale ● List the different methods of payment ● Explain the meaning and features of different methods of payment ● Identify the documents used in the process of purchase and sale
V	<p>Large scale Retail Trade</p> <p>(a) Forms of large scale retail trade - Departmental Store and Multiple shops</p> <p>(b) Non-store retailing - Mail order business, teleshopping, automated vending machines, selling through internet.</p>	<p>The learner would be able to :</p> <ul style="list-style-type: none"> ● Recall the meaning of retail trade ● Explain the meaning of large scale retail trade ● Differentiate between Departmental stores and Multiple shops ● State the features of Mail order business, teleshopping, automated vending machines, selling through internet
VI	<p>Selling</p> <p>(a) Personal Selling - meaning and importance</p> <p>(b) Sales promotion - meaning and techniques</p> <p>(c) Advertising - meaning, importance and media of advertising</p>	<p>The learner would be able to :</p> <ul style="list-style-type: none"> ● Understand the meaning of 'Promotion' ● Explain the meaning of 'Personal Selling' ● Appreciate the importance of 'Personal selling' ● Explain the meaning of 'Sales promotion' ● Identify the different techniques of sales promotion ● Explain the meaning of 'Advertising' ● Mention the different media of advertising ● Appreciate the importance of advertising

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

Objective : The main objective of this paper is to enable the students to understand the fundamental principles and to develop skills of preparing and maintaining simple books of accounts from given details.

One Paper

3 Hours

100 Marks

240 Periods

Unit	Contents	Marks	Periods
1	Introduction to Book Keeping and Accounting	12	30
2	Accounting Equation effects	12	30
3	Nature of Accounts and Rules for debit and credit	12	30
4	Journal	17	30
5	Ledger	15	40
6	Recording and posting of cash transactions	17	40
7	Trial balance	15	40
	Total	100	240

Unit 1 : Introduction to Book keeping and Accounting 30 Periods 12 Marks

Content	Learning Outcomes
Introduction to Book Keeping and Accounting : Need, objectives, advantages	<p>The learners would be able to :</p> <ul style="list-style-type: none"> ● Identify the need of Book Keeping. ● Understand the Objectives of Book Keeping. ● Appreciate the advantages of Book Keeping. ● Describe the meaning, objectives and advantages of accounting.

Unit 2 : Accounting Equation effects 30 Periods 12 Marks

Content	Learning Outcomes
Accounting Equation effects : Business entity Concept, dual aspect of transaction and the accounting equation, effect of transactions on accounting equation.	<p>The learners would be able to :</p> <ul style="list-style-type: none"> ● Understand the importance of business entity concept ● Explain the concept of accounting equation and appreciate that every transaction affects the accounting equation

Unit 3 : Nature of Accounts and Rules of Debit and Credit 30 Periods 12 Marks

Content	Learning Outcomes
Nature of Accounts and Rules of debit and credit : Classification of accounts, rules debit and credit, preparation of accounting vouchers and supporting documents (Bills, cash memo, debit note, credit note)	The learners would be able to : <ul style="list-style-type: none"> • Understand the Classification of accounts • Explain the rules of debit and credit • Apply the rules of debit and credit • Prepare the accounting vouchers with the help of supporting documents

Unit 4 : Journal 30 Periods 17 Marks

Content	Learning Outcomes
Journal : Need for journal, journal entries (no compound entries), subsidiary books (Cash book, purchase book, sales book, purchase return book, sales return book and journal proper)	The learners would be able to : <ul style="list-style-type: none"> • Understand the need for journal • Develop the understanding of recording of transactions in journal • Explain the importance of preparing subsidiary books.

Unit 5 : Ledger 40 Periods 15 Marks

Content	Learning Outcomes
Ledger : Definition and importance, relation between journal and ledger. Meaning of posting, guiding rules procedure of posting transactions from journal to ledger and balancing of accounts.	The learners would be able to : <ul style="list-style-type: none"> • Explain the concept of ledger and its importance in accounting process. • Appreciate the relationship between journal and ledger. • Develop the understanding for posting of transactions and balancing of accounts. • Explain the meaning of ledger posting • Understand the procedure of ledger posting

Unit 6 : Recording and Posting of Cash Transactions 40 Periods 17 Marks

Content	Learning Outcomes
Recording and posting of cash transactions : Necessity of cash book and its preparation. Simple cash book and cash book with cash and discount column. Petty cash book with imprest system.	The learners would be able to : <ul style="list-style-type: none"> • Explain the purpose of maintaining a cash book • Develop the skill of preparing the format of different types of cash books

	<ul style="list-style-type: none"> • Understand the method of recording cash transactions in simple cash book, double column cash book (cash book with cash and discount column) and petty cash book • Understand the concept of imprest system • Develop the skill of maintaining petty cash book on imprest system
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Unit 7 : Trial Balance

40 Periods 15 Marks

Content	Learning Outcomes
Trial Balance : Purpose and Preparation (Only Balance Method; No suspense Account)	<p>The learners would be able to :</p> <ul style="list-style-type: none"> • State the need and objective of preparing trial balance • Develop the skill of preparing trial balance by balance method

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Unit 3 : Bank Reconciliation Statement

50 Periods 20 Marks

Content	Learning Outcomes
Bank Reconciliation Statement : Meaning Preparation of BRS with the given cash book / pass book balance	The learners would be able to : <ul style="list-style-type: none"> • Understand the concept of bank reconciliation statement • Appreciate the need of preparing bank reconciliation statement • Develop understanding of preparing bank reconciliation statement

Unit 4 : Bills of Exchange

30 Periods 14 Marks

Content	Learning Outcomes
Bill of Exchange : Nature and use of Bills of Exchange, Terms used in Bills of Exchange. simple transactions related to bills of exchange (No dishonour, retiring & renewal of the bill)	The learners would be able to : <ul style="list-style-type: none"> • Acquire the knowledge of using bills of exchange for financing business transactions • Understand the need of Bills of exchange in business • State the meaning of different terms used in bills of exchange and their implication in accounting • Develop in the skill of journalising simple bill transactions in the book of creditor and debtor

Unit 5 : Final Accounts

50 Periods 20 Marks

Content	Learning Outcomes
Final Accounts : Preparation of Trading and Profit & loss Account and Balance Sheet of Sole trader. Adjustment for closing stock only. [amount of closing stock to be given]	The learners would be able to : <ul style="list-style-type: none"> • State the meaning of financial statements & the purpose they serve for a sole proprietor. • Develop the skill of preparing Trading Account and calculating gross profit. • Develop the skill of preparing Profit & Loss Account and calculating the net profit • Explain the need for preparing 'Balance Sheet'. • Understand the techniques of preparing the 'Balance Sheet'. • Develop the understanding to to the simple adjustment for closing stock

Unit 6 : Accounting from Incomplete Records

40 Periods 17 Marks

Content	Learning Outcomes
Accounting from Incomplete Records : Meaning; preparation of statement of Profit, statement of affairs. [statement of affairs method only]	The learners would be able to : <ul style="list-style-type: none">● State the meaning of incomplete records● Understand the uses and limitations of incomplete records● Develop the skill of computation of profit / loss by preparing Statement of Profit● Develop the skill of preparing 'Statement of Affairs' and ascertain the position of the business on a particular date.

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e- Publishing and e-Office (Code No. 354/454)

Learning Outcomes

- Ability to demonstrate creation of tables and integrating with (word documents) e-publishing operations
- Ability to use image creation and editing tools
- Ability to demonstrate touch typing with speed and accuracy on different layouts, e.g. QWERTY and INSCRIPT
- Ability to demonstrate conversions of various file format and creating UNICODE compliant documents
- Understanding various components of computer system including peripherals of different types
- Understanding of internet operations & Web applications
- Awareness of Cyber Security and Netiquette
- Awareness of ethical practices in computing
- Awareness of software in open domain and their licensing Scheme

Note:

This Paper has been divided in two parts i.e. theory and practical. The division of marks of theory and practical is as given below:

Theory	30 Marks
Practical	70 Marks
Total	100 Marks

Class IX

Maximum Marks: 30

Time: 2 Hours

Periods: 60

Unit No.	Title of the unit	Marks	Periods	Theory Periods	Practical Periods
1	Introduction to Computing	5	8	2	6
2	Efficient e- typing	3	7	2	5
3	Word Processing-I	6	15	5	10
4	Open source Software and ethical practices	4	6	3	3
5	Working with image and text document-I	6	10	3	7
6	Working with Spreadsheet-I	6	14	3	11
	Total	30	60	18	42

Theory

Maximum Marks: 30

1. Introduction to Computing 5 Marks

- 1.1 Understanding hardware- Starting and shutting down Computer and Printer: Steps to switch on and switch off a computer; Difference between Turn Off, Stand By, Hibernate, and Restart.

Characteristics of Computer, components of computer system - CPU, Memory, Storage Devices (Pen-drive, memory stick, CD - ROM and DVD) and I/O Devices (Input devices: Keyboard, mouse. Output devices: monitor, printer)

Encoding Schemes; ASCII and UNICODE for English and Indian languages

1.2 Keyboard Layout

Types of Keyboards - Physical Keyboards & Virtual Keyboard, Wireless & Wired Keyboard, Standard and Multimedia Keyboard

QWERTY Keyboard Layout: General Keys, Function Keys, Lock Keys, Lock indicators (Lights), Cursor Control Keys, Numeric Keys, Numeric Keypad. Phonetic Keyboarding for non English script.

Setting for Keyboard layouts and language variations.

INSCRIPT Keyboard Layout: importance of INSCRIPT Keyboard, Concept of using standard QWERTY keyboard with INSCRIPT overlay as at <http://tdil.mit.gov.in/isciichart.pdf>.

[Students may be encouraged to find out other relevant keyboard layouts for Indian language processing]

2. Efficient e- Typing 3 marks

- 2.1 Ergonomics: Layout, Correct sitting posture, Position of Keyboards, Mouse and Monitor.

2.2 Methods of Typewriting

2.2.1 Touch Methods of Typewriting

2.2.2 Sight Method of Typewriting

(Advantages and Disadvantages of both the methods)

- 2.3 Positioning of fingers on the Keyboard according to touch method of Typewriting.

- 2.4 Use of Touch Typing Tutor Software (Online and Downloadable; Freeware and Open Source Software) for practice.

- 2.5 Tips for higher efficiency (Speed And Accuracy)

[Students may be encouraged to attain e-typing skills for an Indian language up to 5w/min]

3. Word Processing-I **6 marks**

- 3.1 Creating, Saving and Opening a document in a Word Processor such as Writer.
- 3.2 Text styles (Bold, Italic, and Underline); Selecting Font Faces, Size and Color.
Installing and using non-English fonts.
- 3.3 Unicode: compliant Fonts, Font Convertors
- 3.4 Text Alignment, Automatic Page Numbering with or without header and footer, Cut-Copy-Paste, Undo and Redo.
- 3.5 Preview & Printing a document with different features
(page range, copies, page per sheet, scale to paper size)
- 3.6 Settings for page layout variations.

4. Open source Software and ethical practices **4 marks**

Open Source Software, Features, Shareware, Role of OSS in Education for Creativity promotion, Licensing scheme, Copywriting, GPL (General Public License)

Email etiquettes - proper structure and layout, case sensitivity, Disclaimer to email care with abbreviations and emotions, Gender sensitivity, refrain from copyright violation and piracy etc.

5. Working with image and text document-I (GIMP) **6 marks**

- The Toolbox: Introduction, Tools Icons, Color and Indicator Area, Tool Options, Selection Tools
- Selection Features: Rectangle Selection, Ellipse Selection, Free Selection (Lasso), Fuzzy selection (Magic wand), Select By Color, Intelligent Scissors, Foreground Select
- Paint Tools: Brush Tools (Pencil, Paintbrush, Airbrush), Bucket Fill, Blend, Pencil, Paintbrush, Eraser, Airbrush, Ink, Clone, Heal, Perspective Clone, Blur/Sharpen, Smudge, Dodge/Burn

6. Working with Spreadsheets-I **6 marks**

- Creating, Saving & Opening a Spreadsheet
- Selecting Cells and Ranges
- Entering Numbers & Text in Spreadsheet
- Simple Arithmetic Operations (+, -, *, /)
- Copying Data from Spreadsheet into a Word Processing Document

PRACTICAL WORK

Class - IX

70 marks

1. **Introduction to Computing:** components and operations
 - a. Demonstrate how to start and shut down the computer.
 - b. Use of various input, output and storage devices.
 - c. Getting fingers on the Keyboard and practicing each row of the keyboard. (Home, Upper, Bottom, and Number Rows), Practicing Numeric Keypad, Using Touch Typing Tutor Software.
 - d. Practicing on both QWERTY and INSCRIPT keyboard layout and language variations.

2. Efficient e-Typing

Calculating of Gross (Running) Speed and Accuracy

Calculating of Net (Accurate) Speed and Accuracy

The Purpose of assignment file extends much beyond the formality. The Assignment file should reflect and measure a student's continual improvement in e-Publishing & e-Office. An Assignment file must contain one document per month (in total 3 documents per term). Every month, an initial document without carrying out correction is to be kept in the file which will be known as initial document. The same documents must be duly signed by the instructor. (Private candidate may put self-attested test document)

Self - Assessment

	Month 1	Month2	Month3	Month 4	Month 5	Month 6
Speed						
Accuracy						

An additional analysis report at the end of the school term may be prepared by each student in the following format with self assessment of speed and accuracy.

3. Document preparation : Create a document with the following features:
 - 1) Word Processing Text Styles (B,I,U)
 - 2) Selecting Font, Size and Color, Font Conversion
 - 3) Text alignment
 - 4) Automatic Page Numbering, Cut-Copy-Paste, Word-Count, Preview and printing of documents

Sample Case Studies

- a) Green chilly multi cuisine restaurant is creating a new branch in west extension of the city. Design a menu card highlighting the cuisine and the dishes with their prices.
- b) Hakeem Pharmaceutical Company is located at Arya Nagar Dehradun. Design a sample visiting card for a Medical Representative. Make 5 copies of the card on A4 sheet.
- c) Design a refreshment coupon for all the participants of Techno Fest organized by the school. Replicate as many copies of the coupon on A4 sheet to save the paper.

4. Demonstrating open office software

- 1) Visit <http://www.openoffice.org> and explore and install the open office software specifically CALC and Writer. Take a simple example and re-write the program for an Indian language so as to incite for creative programming.
- 2) Identify cases of violation of ethical practices.

5. Image Creation and editing with the help of following tools:

- 1) Selection Features: Rectangle Selection, Ellipse Selection, Free Selection (Lasso), Fuzzy selection (Magic wand), Select By Color, Intelligent Scissors, Foreground Select
- 2) Paint Tools: Brush Tools (Pencil, Paintbrush, Airbrush), Bucket Fill, Blend, Pencil, Paintbrush, Eraser, Airbrush, Ink, Clone, Heal, Perspective Clone, Blur/Sharpen, Smudge, Dodge/Burn

Sample Case Studies:

- a) Pick an image of an automobile. Delete the picture back ground using selection tools. Insert the edited picture in word processing software and write its specifications.
- (b) Design a Rangoli (Replication of Geometrical Patterns) using refreshment coupon for all the participants of techno fest organized by the school. Replicate as many copies of the coupon on A-4 sheet to save the paper.

6 Spreadsheet Preparation:

Using Arithmetic Operations (+, -, */) and inserting spreadsheet into word document.

Sample Case Studies:

- a) Prepare a Report Card with the following information

• School Name	• Roll no
• Name of the student	• Class and Section

It should also comprise of following column heads

- Name of the Subjects
- Highest marks scored in the class
- Maximum marks
- Marks scored by the student

Use arithmetic operators and cell addresses

1. To compute the total marks obtained
2. Compute the percentage in each subject
3. Find the difference between the highest marks scored in the class and the marks scored by the student in each Subject.
 - b) Prepare a Weather Forecast Report with the following headings
 - Name of a city
 - Maximum temperature of the weeks of the month
 - Minimum temperature of the weeks of the month
 - Find the difference between maximum and minimum temperature of each week
 - Find average maximum temperature of the month
 - Find average minimum temperature of the month

Project Work:

Sample project-I

Create a word document (at least 5 pages long) giving details description about jobs available in IT sector.

Sample project-II

Prepare a dummy report card of any student showing marks and weightage in various subjects and final percentage.

Note: Computing is easy in Hindi and other Indian Languages also. An example case study is given in Hindi, students may prepare similar case-studies in respective regional languages also.

Sample project-III

अपनी कक्षा के छात्रा/छात्राओं की सूची तैयार करो जिसमें उनका अनुक्रमांक, नाम, पिता का नाम, माता का नाम, पता, फोन न. और जन्म दिन का उल्लेख हो।

पोस्टर बनाओ जिसमें “बेटी बचाओ बेटी पढ़ाओ” अभियान को प्रभावी ढंग से दिखाया गया हो। इसके साथ अपनी बात को वर्ड प्रोसेसर से एक पेज में लिखो।

Practical File	Hands on Experience and Viva	Total
20	50	70

QUESTIONS PAPER DESIGN 2017-18
CLASS-IX

e-Publishing and e-Office

Marks: 30

S. No.	Typology of Questions	Very Short Answer (VSA) (1 Mark)	Short Answer -I (SA) (2 Marks)	Short Answer -II (SA) (3 Marks)	Long Answer (LA) (4 Marks)	Total Marks	% Weigh-tage (approx)
1	Remembering (Knowledge based- Simple recall questions, to know specific facts, terms, concepts, principles or theories; Identify, define, or recite, information)	2	1	-	-	4	14%
2	Understanding (Comprehension- to be familiar with meaning and to understand conceptually, interpret, compare, contrast, explain, paraphrase, or interpret information)	1	3	-	-	7	23%
3	Application (Use abstract information in concrete situation, to apply knowledge to new situation; Use given content to interpret a situation, provide an example, or solve a problem)	1	1	1	1	10	33%
4	Higher Order Thinking Skills (Analysis & Synthesis- Classify, compare, contrast, or differentiate between different pieces of information; Organize and /or integrate unique pieces of information from variety of sources)	-	-	1	1	7	23%
5	Evaluation (Judge, and/or justify the value or worth of a decision or outcome, or to predict outcomes based on values)	-	1	-	-	2	7%
	Total	4x1=4	6x2=12	2x3=6	2x4=8	30	100%

Class - X

Maximum Marks: 30

Time: 2 Hours

Periods: 60

Unit No.	Title of the unit	Marks	Periods	Theory Periods	Practical Periods
1	Internet as Web Resource & Network security	6	13	5	8
2	Word Processing-II	9	18	5	13
3	Working with Spreadsheet-II	5	10	3	7
4	Working with image and text document-II	6	12	3	9
5	E-publishing	4	7	2	5
	Total	30	60	18	42

Theory

Maximum Marks: 30

S.No.		Marks
1.	Internet as Web Resource & Network security	6
1.1	Browsers such as Chrome, Mozilla, Internet Explorer	
1.2	Protocol such as TCP/IP, FTP, PPP, Remote Login Protocol (TELNET)	
1.3	Electronic Mail: Create and email, sorting email, attachments (Upload/download). Explore methods for e-mailing non-English documents	
1.4	Office Web Apps : Google docs/Sky drive Creation of (Folder, Document, Form, Spreadsheet)	
1.5	Concepts: Cyber Law, Firewall, Cookies, Hackers and Crackers, Ethical Practices: Netiquettes	
1.6	Practice in on-line transactions such as online registration, net-banking, e-purchasing etc.	
1.7	Precautions in secured transactions	
2	Word Processing-II	9
2.1	Page-Setting (Size, Orientation and Margins), Setting Line Spacing & Paragraph Spacing, Inserting Special Characters and Symbols, Creating Bulleted & Numbered List, Inserting Pictures	
2.2	Using Find & Replace, Using Superscript & Subscript, Writing mathematical formulas and equations	
2.3	Creating a Table and Entering Data in it.	
2.4	Using Spell Check and Grammar Check, Adding Header and Footer.	
2.5	Using Mail Merge	
2.6	File Types in Writer/Clac Document	
2.7	Saving Writer/Clac as Pdf	
2.8	Import files frame call into Writer by using insert OLE objects.	

3.	Working with Spreadsheet-II	5
3.1	Relative referencing, Absolute Referencing, Mixed Referencing	
3.2	Usage of simple Statistical Functions: SUM(), AVERAGE(), MAX(), MIN(), IF function with range of values	
3.3	Embedding Charts of various types: Line, Pie, Scatter Bar and Area Chart.	
4.	Working with image and text document-II	6
4.1	Transform Tool: Align, Move, Crop, Rotate, Scale, Shear, perspective, Flip, The Cage Tool Color Tools: Color Balance. Hue-Saturation, Colorize, Brightness-Contrast, Threshold, Levels, Curves,	
4.2	Posterize, Desaturate	
4.3	Other: Paths, Color Picker, Zoom, Measure, Text	
5.	E-Publishing	4
5.1	e-publishing: Publishing in older days, e-magazine, e-book, e-book: Book marks, Search, Read from, Read to, Page count, Indexing, Summary, Comparing two books, Book review.	
5.2	Digital Library: TIFF, GIT, JPGE	
5.3	e-office operations: Content capturing, Content Authoring, Work Flow, Archiving, Publishing, Indexing Searching & retrieval, Versioning, Aging & retention, security, compression, reporting, Appointment.	
5.4	Collaborative Working e-office working etiquettes and ethical practices, advantages of e-office and application in e- governance.	
5.5	Online tools for converting PDF of doc./ .xls(such as www.zam-zar.com)	
5.6	Online tools to convert Scanned text document (JPEG) to Writer/Clac (such as www.onlineocr.net)	

PRACTICAL WORK Class - X

70 marks

1) Internet as web resource:

- Create an email id on Google, upload an attachment and send email, download the attachment from the received email
- Demonstration of TCP/IP, FTP & Remote login Protocol.
- Web Apps
- Practice in online transaction e.g. Online registration, net banking, e-purchasing etc.
- Demonstration of network security features and precautions regarding secured transaction.

Sample Case Studies

- a. Write a Document on Google drive with a notice for cancellation of winter vacation and opening of school and share it with 5 students of your class.
- b. Create an online registration form in Google drive to register the students for the competition to be held in school with the following information
 - S. No.: Text
 - Name of the Student: Text
 - Date of Birth: Date
 - School Name: Paragraph Text
 - Tel. No.: Texts
 - Event Name: Check Boxes
 - Gender: Choose from List
 - Participation in Surprise Event: Multiple Choices

Share it with the students of your class (using email IDs). Print the Spread sheet is created after filling the form.
- c. Practice in online transaction e.g. online registration, net banking etc.
- d. Demonstration of network security features and precautions regarding secured transaction.

2) Document Preparation:

Layout are required to be created with the following features:

1. Page-Setting, Setting Line Spacing & Paragraph Spacing.
2. Inserting Special Characters and Symbols inserting Pictures
3. Creating a Table and Entering Data in it
4. Adding Header and Footer, Creating Bulleted & Numbered List.
5. Spell check and grammar check of a document.
6. Save the document created in the above specified lab activity in 4(a) and 4(b) in pdf. Open the documents thus saved and observe the associated software.
7. Import spreadsheet file into document file

Sample Case Studies

- a. Create a newsletter for your school
- b. Your school has organized Annual Function, Create a report that includes the highlights of the day.

- c. Using Mail Merge replicate a birthday invitation letter with five different addresses. [Students may be encouraged to work on a case study with entries in an Indian language.]

3) Spreadsheet Preparation

Use simple Statistical Functions: SUM (), AVERAGE (), MAX (), MIN (). IF function with range of values, embedding Charts of various types: Line, Pie, Scatter Bar and Area in a Worksheet

Sample Case Studies

- a) Create a worksheet to organize your monthly expenses and calculate the balance for you. You can use fictitious data for this assignment!

Your worksheet should include the following data:

- a. A title such as “ My Monthly Expenses”
 b. Expenses: At least four items (e.g. rent, utilities, food , parking, payroll, phone bill, etc.) during a period of four months
 c. Income: At least two sources (e.g. Loan, Family Support, Student Work, Other, etc.) during a period of four months

Follow the instructions below and complete a personal work sheet for the expenses you spent in the past 4 months.

- (i) Set up the table. Plan how you would like the table to look like. The following is an example.

My Monthly Income

Expenses	September	October	November	December	Total	Average Check
Housing						
Phone						
Tuition						
Utilities						
Food						
Total Expenses						
Income						
Work sutdy						
Loan						
Total Income						
Balance						

- (ii) Input raw data

- (iii) Compute the total
- Compute the total expense for each of the months
 - Compute the total expense for each of the items across the four months
 - Compute the total income for each of the months
 - Compute the total income for each of the sources across the four months

Compute the average

- Compute the average for each of the items across the four months
- Compute the average income for the different sources
- Compute the average monthly income

Compute the balance: difference between income and expense

For each of the months, between the total income and the total expense for the four months and the difference between the total income and the total expense during the four months.

Multiply the average by four to double-check the average operation. In other words see if the result of the multiplication matches the total.

iv. Create graphs.

- Create a column chart on monthly expenses in the worksheet, including a chart title, and axes titles. Your legend must have specific labels instead of “series 1, Series 2... and Series 5”
- Create a second graphic (of your chosen style) on the monthly balance during the past four months.

v. Header/footer

Add a header to the worksheet that displays your name, email address, class & section, and a footer that displays the number of pages.

vi. Print it

4. Image and Text Editing:

Transform Tools: Align, Move, Crop, Rotate, Scale, Shear, Perspective, Flip, The Cage Tool, Color Tools: Color Balance, Hue*Saturation, Colorize, Brightness-Contrast, Threshold.

Sample Case Studies

- 1) Create a collage from the pics of any event held in school
- 2) Create a logo of school magazine.

5. E-Publishing

- Preparing e-book in PDF format

- Convert scanned document into word/spreadsheet format.
- Prepare a write up on difficulties faced in e-publishing and precautions you suggest.

Project Work:

Sample Project-I:

ABC Company is planning to establish a publishing House. They have asked you to explore the market and submit the report that should have

- Hardware requirement and estimated cost
- Software requirement and estimated cost
- Infrastructure requirement
- Manpower
- Electricity
- Other expenses
- Expected market
- Profits etc.

The report should have

- A letter head having company's logo and name
- Advertisement in pdf format
- Brochure having details of Publishing House

Use mail merge feature to send the report to various banks for sanctioning of loans.

Sample Project-II:

Given a bilingual document in Unicode, work out the procedure for E-publishing it.

Note: Computing is easy in Hindi and Other Indian Languages also. An example case study is given in Hindi. Students may prepare similar case-studies in respective regional languages also.

Sample Project-III:

“जन धन योजना” के अंतर्गत गोपाल गाँव के निवासियों ने केनरा बैंक में खाते खोले हैं, इनमें बैलेंस शुन्य हो सकता है, या 5 डिजिट में धनराशि हो सकती है, सूची तैयार करो जिसमें 50 निवासियों को वोटर कार्ड संख्या, निवासी का नाम, लिंग, आयु, खाता संख्या, जमा धनराशि हो।

Filter command से इस सूची से उन निवासियों की सूची तैयार करो, जिनकी जमा धनराशि शुन्य है।

Practical File	Hands on Experience, Project Report & Viva	Total
20	50	70

QUESTIONS PAPER DESIGN 2017-18
CLASS-X

e-Publishing and e-Office

Marks: 30

S. No.	Typology of Questions	Very Short Answer (VSA) (1 Mark)	Short Answer -I (SA) (2 Marks)	Short Answer -II (SA) (3 Marks)	Long Answer (LA) (4 Marks)	Total Marks	% Weigh-tage (approx)
1	Remembering (Knowledge based- Simple recall questions, to know specific facts, terms, concepts, principles or theories; Identify, define, or recite, information)	2	1	-	-	4	14%
2	Understanding (Comprehension- to be familiar with meaning and to understand conceptually, interpret, compare, contrast, explain, paraphrase, or interpret information)	1	3	-	-	7	23%
3	Application (Use abstract information in concrete situation, to apply knowledge to new situation; Use given content to interpret a situation, provide an example, or solve a problem)	1	1	1	1	10	33%
4	Higher Order Thinking Skills (Analysis & Synthesis- Classify, compare, contrast, or differentiate between different pieces of information; Organize and /or integrate unique pieces of information from variety of sources)	-	-	1	1	7	23%
5	Evaluation (Judge, and/or justify the value or worth of a decision or outcome, or to predict outcomes based on values)	-	1	-	-	2	7%
	Total	4x1=4	6x2=12	2x3=6	2x4=8	30	100%

**(E) FOUNDATION OF INFORMATION TECHNOLOGY (FIT)
(CODE No. 165) (Session 2017-18)**

Learning Outcomes:

- Understanding organization of a computer system and networking.
- Basic understanding of database design.
- Ability to work on office tools such as word processor, spreadsheet and presentation.
- Ability to apply knowledge and practice on office tools to develop IT applications.
- Ability to use Indian languages in developing an IT application.
- Ability to design HTML webpage.
- Appreciation/awareness of societal impacts of information technology in business. Public services, education, health etc.
- Awareness of basic information security issues.

Job Opportunities:

- Upon completion of this optional course on FIT at secondary level, one will be able to assist in IT-enabled office work.

CLASS - IX

Theory: 40 Marks

Practical: 60 Marks

Unit	Description	Marks	
		Theory	Practical
Unit I	Basics of Information Technology	10	-
Unit II	Information Processing Tools	25	30
Unit III	Societal Impacts of IT	05	-
Unit IV	IT Applications	-	30
	Total	40	60

CLASS IX : (THEORY)

Time : 2½ hours

Marks : 40

Unit I: Basics of Information Technology

Convergence of Technologies: Computer, Communication and Content Technologies.

Computer System: Characteristics of a computer, components of a computer system - CPU (CU & ALU), Memory, Storage Devices and I/O Devices

Memory: Primary (RAM & ROM) and Secondary Memory.

Units of Memory: Byte, Kilobyte, Megabyte, Gigabyte, Terabyte, I/O Devices - Keyboard, Mouse, Printer, Joystick, Scanner, Microphone, OCR, MICR, Light Pen, Barcode Reader, Digital Camera, Web Camera, Speaker, Plotter

Storage Devices: Hard Disk, CD ROM, DVD, Pen/Flash Drive, Memory Stick

Types of Software: System Software (Operating System), Application Software (General purpose application software - Word Processing, Spreadsheet, Presentation, Database Management; Specific purpose application software - (Accounting Management, Reservation System, HR Management, Attendance System, Payroll System, Inventory Control System, Billing System) and Utility Software (Disk/Folder/Files Management, Virus Scanner/Cleaner, Encryption/Decryption Tools)

Communication Technology:

Computer Networking - LAN, MAN, WAN, Internet, Interspace

Wired Networking Tools: Co-axial Cable, Ethernet Cable, Optical Fiber

Wireless Networking Tools: Bluetooth, Infrared and WiFi

Content Technology:

Data, Information and Multimedia (Picture/Image, Audio, Video, Animation)

Unit II: Information Processing Tools

Operating System - Basic concepts of Operating System, Operating System: Need for operating system, Functions of Operating System (Processor Management, Memory Management, File Management and Device Management), Types of operating system - Interactive (GUI based), Real Time and Distributed; Commonly used operating systems: UNIX, LINUX, Windows, Solaris, BOSS (Bharat Operating System Solutions); Mobile OS - Android, Symbian.

Basic components of a GUI Window: Desktop, Title Bar, Menu Bar, Status Bar, Scroll Bars (Horizontal and Vertical); Frame; Basic operations of left and right buttons of mouse, Creating Shortcut, Basic Tools: Text Editor, Painting Tool, Calculator, using Mouse and moving icons on the screen, Task Bar, Different types of menu and menu selection, running an application, setting system date and time; viewing files, concept of folders and directories, creating/moving/ renaming/ deleting files and folders, opening and closing Windows, Minimise, Restore and Maximise forms of windows.

Office Tools

Word Processing Tools: 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. Formatting paragraphs with line and/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 Pictures, Page Setting, Bullets and Numbering, Borders and Shading, Format Painter/Paintbrush, Find and Replace, Inserting Tables: inserting, deleting rows and columns, merging cells, splitting cells.

Using auto-format, mail merge, track changes, review comments, usage of drawing tools, shapes and mathematical symbols.

Presentation Tool: 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; Printing Slides Handouts, Inserting pictures from files, Animating pictures and Text with Sound Effects, Timing Text box, Pictures and Slides, Rehearse Timings, Ungrouping and Grouping Objects (like text, picture).

Spreadsheet Tool: Introduction to Spreadsheet, Concept of Worksheet and Workbook, 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, Formula-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); Embedding Charts of various types: Line, Pie, Scatter, Bar and Area in a worksheet; inserting tables in a worksheet.

Unit III: Societal Impacts of IT

Benefits of ICT in Education, Healthcare, Governance, Business, Plagiarism, Privacy, Security and Integrity of Information; Intellectual Property Rights, Careers in IT; Design and manufacturing.

Unit IV: IT Applications

Students are suggested to work on the following areas using Word Processing Tool, Spreadsheet Tool and Presentation Tool.

Domains:

Multi Lingual Documentation:

- Letter Writing - content, context, addressee, Mail-Merge Formal/Informal letter
- Report Writing - content, presentation, context

- Greeting Card - design, context, recipient
- Poster Making - design, context, target group

Presentation:

- School Presentation
- Environment (Save Energy) and Pollution (Global Warming)
- Product Advertisement
- Science and Social Science topic from the course
- Trends in Wireless Computing

Analysis Reporting:

- School/Class Result with student-wise and subject-wise marks
- Cricket Score Record
- Weather Forecasting Report

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CLASS - IX (Practical)

Time: 4 hours

Marks : 60

(A) HANDS ON EXPERIENCE**30 Marks****1. Working on Operating System:**

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

- Create
- Rename
- Copy / Cut / Paste
- Delete
- Commands related to Text Editor / Drawing Tool

2. Word Processing*

A document is required to be created for testing the following areas

- Editing and formatting text and paragraph
- Page and paragraph setup
- Inserting symbols and pictures

3. Presentation*

A presentation is required to be created with 4 slides for testing the following areas:

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

4. Spreadsheet*

A spreadsheet is required to be created for testing the following areas:

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

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

(B) IT APPLICATION REPORT FILE**15 Marks**

Students are supposed to make an IT Application Report File containing real life assignments using Word Processing, Presentation and Spreadsheet Tools on at least 15 topics from the domain mentioned in Unit IV:

- At least 5 documents of Word Processing tools along with mail merge feature
- At least 5 presentations of Presentation tools
- At least 5 spreadsheets with graphs

(C) IT APPLICATION PROJECT using word processing, spreadsheet and presentation tools **10 Marks**

(D) VIVA VOCE **05 Marks**

Viva based on IT applications report file.

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CLASS - X

Theory: 40 Marks

Practical: 60 Marks

Unit	Description	Marks	
		Theory	Practical
Unit I	Basics of Information Technology	10	-
Unit II	Information Processing Tools	25	30
Unit III	Societal Impacts of IT	05	-
Unit IV	IT Applications	-	30
	Total	40	60

CLASS - X (THEORY)

Time : 2½ hours

Marks : 40

Unit I: Basics of Information Technology

Internet: World Wide Web, Web servers, Web Clients, Web sites, Web Pages, Web Browsers, Blogs, News groups, HTML, Web address, E-mail address, URL, HTTP, FTP, downloading and uploading files from remote site;

Services available on Internet: Information Retrieval, Locating sites using search engines and finding people on the net;

Web Services: Chat, email, Video Conferencing, e-Learning, e-Banking, e-Shopping, e-Reservation, e-Governance, e-Groups, Social Networking.

Unit II: Information Processing Tools**Office Tools**

Database Management Tool: Basic Concepts and need for a database, Creating a database, DataTypes-Text, Number, Date, Time, Setting the Primary Key, Entering data into a database, Inserting and deleting Fields, Inserting and deleting Records, Field Size, Default Value, Creating Query using Design view.

Information Representation Methods**Hyper Text Markup Language**

Introduction to Web Page Designing using HTML, Creating and saving an HTML document, accessing a web page using a web browser (Google Chrome, Internet Explorer, Mozilla Firefox, Opera, Apple Safari, Net scape Navigator);

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) inserting comments, H1..H6 (Heading), P (Paragraph), B (Bold), I (Italics), U (Underline), UL & OL (Unordered List & Ordered List Attributes: TYPE, START), LI (List Item)

Insertion of images using the element IMG (Attributes: SRC, WIDTH, HEIGHT, ALT, ALIGN), Super Script SUP, Subscript SUB, Creating Table using the element TABLE (BACKGROUND, BGCOLOR, WIDTH, CELSPACING, CELLPADDING, BORDER), TR, TH, TD, ROWSPAN, COLSPAN, Internal and External Linking between Web Pages: Significance of linking, A - Anchor Element (Attributes: NAME, HREF, TITLE, MAILTO).

XML (Extensible Markup Language)

Introduction to XML, Difference between XML and HTML with respect to the following: Data separation, data sharing, document structure, tags, nesting of elements, attributes, values. XML Elements - Defining own tags in XML, root elements, child elements and their attributes; Comments in XML, White space and new line in XML, well formed XML documents, validating XML documents, XML Parser, Viewing XML documents in a web browser.

Unit III: Societal Impacts of IT

Information Security: Virus, Worms, Trojans and Anti-Virus Software, Spyware, Malware, Spams, Data Backup and recovery tools and methods, Online Backups, Hacker and Cracker with regard to Computer Data and Applications, Social Networking Information security provisions in e-commerce, Benefits of ICT in Education, Healthcare, Governance, Virtual, School, emergence of Knowledge economy, Impact of ICT on Society:

Knowledge based society, Infomania, Digital Unity and Digital Divide.

Unit IV: IT Applications

Students are suggested to work on the following suggestive areas using Database Management Tool and HTML on topics implementing the tools/elements covered in the course.

Domains:

Database Design:

- Personal Data Record File
- School/Class Result Record
- Employee Payroll
- Stock Inventory
- Vehicle Parking Record File

Webpage Design:

- My Home Page
- My School

- My Family
- Personal Blog with Name, Photo, Areas of Interest, School, State, Country
- School Website - Infrastructure, Facilities, Uniform, Motto, School Pictures, Extra Curricular Activities, Subject and Language Options
- Travel and Tourism
- Statistics on India - State wise Area, Population, Literacy (Enrolment in Primary, Middle, Secondary, Senior Secondary), Gender Ratio
- Environment (Save Energy) and Pollution (Global Warming)

CLASS - X (Practical)

Time : 4 hours

Marks : 60

(A) HANDS ON EXPERIENCE

30 Marks

1. Database Design:*

- Creating and entering data into a database
- Setting the primary key
- Inserting meaningful data and organising
- Creating Query with the same design view of the table.

2. Webpage Designing *

- Adding a title to webpage
- Formatting Text
- Adding Ordered/Unordered Lists
- Writing Text in Paragraphs
- Inserting Image
- Adding content in Tabular Form
- Adding Internal / External links.

The students are supposed to know the tools and style for designing domain specific web pages from real life applications and the topics mentioned in the syllabus.

3. XML Assignment*

Students to be asked to create an XML document on the lines of XML concepts covered in theory syllabus.

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

(B) IT APPLICATIONS REPORT FILE 15 Marks

Students are supposed to make an IT Application Report File containing real life assignments using a Database Management Tool and HTML

- 5 Database Solutions
- 8 HTML source code along with browser view
- 2 XML Documents Source Code and View

(C) IT Application project using database and website design in a domain such as School Management, Public Services Computing, Business Computing. 10 Marks**(D) VIVA VOCE 05 Marks**

Viva based on IT applications report file.

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(F) INFORMATION AND COMMUNICATION TECHNOLOGY (ICT)
(Code No. 166) (Session 2017-18)

Learning Outcomes:

1. Ability to develop a basic know how of one's computer system.
2. Ability to use Internet and its services.
3. Ability to efficiently work on Image editing tools.
4. Ability to design a website using HTML.
5. Ability to design Online forms using HTML.
6. Ability to apply style sheets using CSS.
7. Ability to recognize security threats and take preventive measures.

COURSE STRUCTURE
Class - IX

Theory: 40 Marks

Practical: 60 Marks

Unit	Name of Unit	Marks	
		Theory	Practical
Unit I	Basics of Internet	5	-
Unit II	Web services	5	-
Unit III	Introduction to GIMP	10	30
Unit IV	Introduction to HTML	15	30
Unit V	Security Threats and Security Measures	5	-
	Total	40	60

Class-IX
Theory Paper

Time : 2½ hours

Marks : 40

Unit I: Basics of Internet

Marks: 5

World Wide Web - History of World Wide Web, difference between Internet and www, search engines.

Web Servers: What is a server; Server software, Services provided by servers and their types.

Website: Definition and its difference from portal, Components of website, Construction of website, how to build a website? elements of website, software used to create website.

Web pages: Definition of webpage, what does it contain? static and dynamic areas, what makes a webpage work?, difference between web page and website.

Web Browser: Toolbar, SSL, names of various web browsers.

Blogs- Definition of blog and bloggers, advantages and disadvantages of blogging.

URL: Definition, elements, absolute and relative URL

Protocols: Definition, TCP/IP, HTTP, FTP which one to use when and why, applications and examples.

Unit II: Web Services

Marks: 5

Concept of web services

Email: Definition, protocols used in email services, mail account and address, sending and receiving an email, difference between cc and bcc, spam and junk, Email etiquettes- proper structure and layout, case sensitivity, disclaimer to email, care with abbreviations and emotions, gender sensitivity,

Chat: Definition, chat room, commonly used types of chat.

Video Conferencing : Definition, areas of application, advantages and disadvantages of video conferencing.

e-Learning: Definition, benefits, application areas, e-learning software.

e-Shopping: Definition, advantages and disadvantages, sites available, threats and security concerns.

e-Reservation: Definition, benefits, application areas, reservation process, live and nonlive reservation

e-Group: Definition, features, benefits.

Social Networking: Definition, names of various social networking web sites, merits and demerits, service providers, features available, ethics.

Unit III: Introduction to GIMP

Marks: 10

Image editing: Basics of image editing and their features. Various image editing software including freeware and paid software.

GIMP- Introduction, features and uses of GIMP. Downloading GIMP, GIMP compatible platforms. Creation of new file using shortcut or mouse. Default extension of these files and opening of existing file.

Saving a file with keyboard or mouse, .xcf and various file formats supported by GIMP. Basics of GIMP window, Understanding main components of GIMP window, Toolbox.

Toolbox- Explain selection tools, text tools, eraser tools, bucket fill tools, foreground and background.

Handling of menus in GIMP with its editing features, Image handling by using various selections and paint tools, resizing (scaling) and cropping, editing images for web, Layers.

Unit IV: Introduction to HTML**Marks: 15**

Introduction and origin of HTML, History of HTML, Advantages of using HTML, Tools to be used, Tags and attributes, Document structure

Tags and attributes- tags - what are they, tag format, single and multiple tags, empty elements and container elements, Formatting elements.

Structure of HTML document- HTML, HEAD, TITLE, BODY, Attributes (BACKGROUND, BGCOLOR, TEXT, LINK, ALINK, VLINK)

Formatting elements: Font (attributes - colour - ,), size - ,), face), Centre,
, <HR>, (attributes- size, width, align, no shade, colour) Headings (H1 to H6), Paragraph :<p></p> , attributes : ALIGN , Bold, , Italics<I>, </ I>, underline<U>, </U>.

LISTS- requirement of list in HTML, definition and introduction of LIST, , different types of lists, unordered or bulleted list ..., ordered numbered list ..., definition or glossary list<dl> ...</dl>, <dt>...</dt>(attribute- type, start)

Inserting Image, Audio and Video, Image attributes - align, border, alternate label, width and height)

Audio (attributes - autoplay and controls)

Video (attributes - height, width, auto buffer, controls)

Unit V: Security Threats and Security Measures**Marks: 5**

Virus- definition, types, virus spread, protection, current threats

Worms- definition, types, spread, protection, current threats

Trojans- definition, Trojan spread, protection

Spyware- definition, symptoms, prevention and protection

Malware- definition, types, prevention

Spams- definition, detection and prevention

Hackers and Crackers- definition, tools available, types of hacking, difference between hackers and crackers, prevention and protection.

Antivirus tools- free and paid tools, latest tools, there style of working, importance of regular update

Data Backup and Recovery tools- Need for backup, technologies and tools available, importance of backup and recovery plan, types of backup.

Class - IX PRACTICAL WORK

Duration : 4 hours

Marks : 60

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 given below:

- | | | |
|------------|---|-----------------|
| (A) | HANDS ON EXPERIENCE | 30 Marks |
| | GIMP | 15 Marks |
| | HTML | 15 Marks |
| (B) | IT Application Report File | 15 Marks |
| | Students are supposed to make a IT Application Report File Containing Real life assignments/ presentations using GIMP and HTML. | |
| | <ul style="list-style-type: none"> • At least 7 Activities related to GIMP • At least 8 webpages covering the concepts covered. | |
| (C) | Project Work | 10 Marks |
| | Developing a website on a topic containing all the concepts covered and images edited using GIMP. | |
| (D) | Viva Voice | 5 Marks |

Suggested Activities

1. Find out and make a list of all the e-commerce websites, Academic websites and social networking sites.
2. Find out all the latest search engines with the features and make a presentation.
3. Students can be asked to make a list of IP addresses of few of their favorite sites using google search engine. Ask them to use those IP addresses to open the sites.
4. Ask students to create a blog for their class and update the blog on daily basis.
5. Make a list of all the sites through which video conferencing is possible without paying any money.
6. Create an e-group of your class and share your view on the current societal issues with your friends.
7. Find out and make a list of various e-shopping websites and make a presentation on the information gathered.

8. Login to your email account and perform the following operations:-
 - a. Compose a mail using all the options of email such as bcc and cc.
 - b. Add email address from your address book.
 - c. Transfer mail from Inbox to spam and vice versa. Create different folders and arrange mails in different folders.
9. Create an account on any popular social networking site for your class and invite all teachers and students of your class to this account. Use this account for academic purpose.
10. Create a blog on any popular blogging site keeping the following points into consideration:
 - Enter the title of the blog as “School Activities at a glance” - Select a suitable template for your blog.
 - The URL of your blog should be your complete name.
 - Publish the post on the monthly basis with the pictures of your school activities of a particular month and then view this post.
 - Sign out from the blog website.
11. Design a digital poster of any e-shopping website.
12. Take your own picture, scan it and change the background colour and clothes colour using paint tools and layouts.
13. Collect three or four images like water image, building image, ship image and a bird image. Make one image showing reflection of the building on the shore and bird flying in a sky in water with the ship.
14. Import an image file of your choice. Change the foreground and the background color, use a text tool to give a heading to your file. Add a layer and place another picture on it. Select the text tool and type your name in blue color. Select a portion of the picture and then change the direction. Save the file.
15. Make a collage on “Heritage of India”
16. Create an advertisement for a magazine on any product of your choice.
17. Try to design the logos of some famous brands.
18. Create a webpage on any of the following:
 - My Home Page
 - My School
 - My Family
 - School Website - Infrastructure, Facilities, Uniform, Motto, School Pictures, Extra-Curricular Activities, Subject and Language Options
 - Travel and Tourism

- Statistics on India - State wise Area, Population, Literacy (Enrolment in Primary, Middle, Secondary, Senior Secondary), Gender Ratio
- Environment (Save Energy) and Pollution (Global Warming)

Note: Activities mentioned above are only suggestive. Teachers should encourage children to innovate.

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COURSE STRUCTURE Class - X

Theory: 40 Marks

Practical: 60 Marks

Unit	Name of Unit	Marks	
		Theory	Practical
Unit I	Computer Components and Interconnection	5	-
Unit II	Advance GIMP	10	20
Unit III	Advanced HTML	20	40
Unit IV	Network Security	5	-
	Total	40	60

Class-X Theory Paper

Time : 2½ hours

Marks : 40

Unit I: Computer Components and Interconnection

Marks: 5

Computer System and its definition, Hardware, Basic components of a Computer System, Input Unit, Central processing Unit/CPU, Output unit and functions, Memory, types of memory, Primary Memory, RAM (Random Access Memory), ROM(Read Only Memory), SECONDARY MEMORY, Binary digit, concept of bit and bytes, Types of computers (Analog, Digital, Hybrid), characteristics of computers, types of software (System Software, Application Software, Utility Softwares, classification of Programming Languages Ports and Cables)

Unit II: Advance GIMP

Marks: 10

Toolbox-Move tool, Alignment tool, Scale tool, Shear tool, Perspective tool, Flip tool, Blend tool, Blur/Sharpen tool, Smudge tool, Dodge / Burn tool Painting in GIMP-Pencil and paintbrush tool

Operations on Layers (Adding new layers, Renaming a Layer, Deleting a Layer, Merging a Layer, Scaling a layer, Duplicating a Layer)

Masking-Introduction and example, editing a mask

Unit III: Advanced HTML

Marks: 20

Representing data in Tabular forms, Concept of Table

Attributes <table> ..</table> ,<TR>..</TR>, <TD>..</TD>TH, Attributes: Colspan, ROWSPAN

Properties: Align, width, Border, Color, Bgcolor, background, <CAPTION> tag

Working with frames, frame attributes (<frameset..>), Attributes of <frameset>; Rows, Cols, Border, Frameborder, Framespacing.

Frameset element and its attribute (Src, Scrolling, Noresize), target attribute in anchor tag.

Working with HTML Forms

Introduction and explanation of forms, Tags and attributes used in Form, <Form>..</Form> INPUT tag and its attributes (Name, Size, Maxlength, Type)

Fields displayed by type attribute, (Text Box Field, Radio Buttons, Check boxes, command Button, Drop down Box , TEXTAREA and SELECT)

DHTML & CSS

Introduction to DHTML, Features and uses of DHTML, Components of DHTML, Cascading style sheet, Advantages and Limitations of CSS,

Methods of applying CSS to an HTML document: In-line (the attribute style) and Internal (the tag style), External (link to style sheet), creating and saving cascading style sheets

Introduction and familiarization of Font: Font-Family, Style, Size, Variant, Weight; Text and Background properties; Colour properties - Text Indent, Align, Decorating, Spacing, Transform, Text alignment, decoration and transformation, Foreground and Background colour, Image and Repeat

Use of margin and margin properties, Concept of padding and Border ; Padding and Border Properties

Absolute and Relative Positioning

Unit IV: Network Security

Marks: 5

Concepts: Cyber Law, Cyber Crime, Fire wall, Cookies, Hackers and Crackers

Open Source Software, Free ware, Shareware, Licensing scheme, Copywriting, GPL(General Public Licence), Licensed software, Copyright software, refrain from copyright violation and piracy etc.

Class X PRACTICAL WORK

Duration : 4 hours

Marks : 60

Design of a Practical Question Paper

Instructions on the basis of syllabus, distribution of marks and conduct of practical examination have been provided.

The examiner is advised to set the question paper according to the prescribed curriculum and distribution of marks.

(A) HANDS ON EXPERIENCE

30 marks

GIMP 10 marks

ADVANCED HTML 20 marks

(B) IT Application Report File 15 Marks

Students are supposed to make a IT Application Report File Containing Real life assignments/ presentations using GIMP and Advanced HTML.

- At least 5 Activities related to Advance GIMP
- At least 10 webpages covering the concepts covered such as Tables, Frames, Forms, DHTML and CSS.

(C) Project Work 10 Marks

Developing a website on a topic integrating all the concepts covered using advance GIMP and advanced HTML.

(D) Viva Voice 5 Marks**Suggested Activities**

1. Find out and make a list of the types of memory available in the market and their storing capacity. Also find out, about the various utility and application software(s) used, and share this information through social networking sites. Create a document/ spreadsheet/form through Office Web Apps e.g. google docs/sky drive and share it with your friends.
2. Create a collage from the pictures of any recent event held in school.
3. Design a digital poster for any state of your choice in India depicting their tourist spots and thus promoting tourism.
4. Collect and import few pictures or images of important monuments (tourist spots). Add layers and place a picture in each layer. Merge layers and edit layers and use mask to selectively colour the images.
5. Create a website for a Computer Hardware firm. The firm deals in various output units and various types of memory. Collect information about various brands of printers, scanners, memory etc. available in market. Show the various product details in tabular form on each web page.
6. Create following online forms:
 - a) Adhaar Card
 - b) Railway Reservation form
7. Using HTML design a web site for your school.
8. Using HTML design a web site providing information about Open source, free ware, licensed software(s).
9. Collect information of Cyber Laws and create a web site.

Note: Activities mentioned above are only suggestive. Teachers should encourage children to innovate.