विषय सूची

क्रम संख्या	विषय का नाम	पृष्ठ संख्या
01	हिन्दी	2
02	अंग्रेजी	5
03	संस्कृत	7
04	सामाजिक विज्ञान	10
05	विज्ञान	16
06	गणित	20
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08	संगीत	25
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10	व्यापारिक तत्व	28
11	बहीखाता एवं लेखाशास्त्र	28
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2009—2010

Class - IX

हिन्दी

एक प्रश्नपत्र : समय — 3 घंटे पूर्णांक (70+30) 100

		अंक
(क)	अपठित गद्यांश	10
(ख)	रचना	15
(ग)	व्यावहारिक—व्याकरण	10
(घ)	पाठ्य—पुस्तक : क्षितिज भाग—1	24
	पूरक—पुस्तक : कृतिका भाग—1	06
(ङ)	मौखिक—अभिव्यक्ति	05
(च)	संस्कृत पाठ्य—पुस्तक	20
(छ)	वाक्य रचना/व्याकरण	06
(ज)	मौखिक—अभिव्यक्ति	04

खण्ड क — अपठित गद्यांश **10 अंक**

1. एक गद्यांश : (i) साहित्यिक गद्यांश (300 से 350 शब्द) 10

उपर्युक्त गद्यांश में शीर्षक का चुनाव, विषय वस्तु का बोध, भाषिक बिंदु/संरचना आदि पर पाँच अति लघूत्तरात्मक प्रश्न पूछे जायेंगे।

खण्ड ख — रचना **15 अंक**

2. (i) संकेत बिन्दुओं पर आधारित किसी एक आधुनिक विषय पर लगभग 200 शब्दों में निबंध—लेखन 10

3. (ii) संवाद—लेखन/पत्र लेखन 5

खण्ड ग — व्यावहारिक — व्याकरण **10 अंक**

4. (i) शब्द निर्माण (उपसर्ग—प्रत्यय) विशेषण, लिंग और वचन का विशेषण पर प्रभाव 2

5. (ii) कारक चिह्नों का प्रयोग 2

6. (iii) वाक्य—रचना—वाक्य के अंग, अर्थ के अनुसार वाक्य—भेद 2

7. (iv) पर्यायवाची, विलोम, श्रुतिसमभिन्नार्थक शब्द 2

8. (v) मुहावरे—वाक्य प्रयोग 2

खण्ड घ — पाठ्य पुस्तक **30 अंक**

क्षितिज भाग - 1 (12+12) **24 अंक**

9. (i) दो में से किसी एक काव्यांश पर अर्थ—ग्रहण संबंधी तीन प्रश्नों में से दो प्रश्न 3+3 =6

10. (ii) निर्धारित कविताओं में से तीन बोधात्मक प्रश्नों में से दो प्रश्न 3+3 =6

11. (iii) दो में से किसी एक गद्यांश पर आधारित अर्थ ग्रहण संबंधी तीन प्रश्न 2+2+2 =6

12. (iv) गद्य पाठों पर आधारित तीन में से दो बोधात्मक प्रश्न 3+3 =6

खण्ड ङ — पूरक पुस्तक कृतिका भाग—1 **06 अंक**

13. पूरक पुस्तक चार में से तीन लघूत्तरात्मक प्रश्न 2+2+2 =6

मौखिक अभिव्यक्ति हिन्दी **05 अंक**

खण्ड च — पाठ्य—पुस्तक संस्कृत विनोदिनी भाग -1 **20 अंक**

(i) गद्य अनुच्छेद पर आधारित चार में से तीन प्रश्नों के उत्तर 2+2+2 =6

(ii) पद्य अनुच्छेद पर आधारित तीन में से दो प्रश्नों के उत्तर 2+2 =4

(iii) पाठ्य—पुस्तक पर आधारित पाँच में से तीन प्रश्नों के उत्तर 2+2+2 =6

(iv) दिए गये शब्दों की सहायता से वाक्य पूरा करना
(छः प्रश्नों में से चार वाक्य बनाना) 1+1+1+1 =4

खण्ड छ — संस्कृत व्याकरण **06 अंक**

(i) स्मृति आधारित प्रश्न/श्लोक/वाक्य रचना

(ii) **{संधि, स्वर संधि (दीर्घ, वृद्धि एवं गुण संधि) समास, कारक, उपसर्ग}**
चार प्रश्नों में से तीन प्रश्नों के उत्तर 2+2+2 =6

खण्ड ज — मौखिक अभिव्यक्ति हिन्दी तथा संस्कृत **04 अंक**

1. सुनना

वर्णित या पठित सामग्री को सुनकर अर्थग्रहण करना, वार्तालाप, वाद विवाद, भाषण, कविता पाठ आदि को सुनकर समझना, मूल्यांकन करना और अभिव्यक्ति के ढंग को जानना

2. बोलना

(i) भाषण, वाद–विवाद
(ii) गति, लय, आरोह–अवरोह सहित सस्वर कविता–वाचन
(iii) वार्तालाप और उसकी औपचारिकताएँ
(iv) कार्यक्रम–प्रस्तुति
(v) कथा–कहानी अथवा घटना सुनना
(vi) परिचय देना, परिचय प्राप्त करना
(vii) भावानुकूल संवाद–वाचन

वार्तालाप की दक्षताएँ

टिप्पणी : वार्तालाप की दक्षताओं का मूल्यांकन निरंतरता के आधार पर परीक्षा के समय होगा।

श्रवण (सुनना) का मूल्यांकन

परीक्षक किसी प्रासंगिक विषय पर एक अनुच्छेद का स्पष्ट वाचन करेगा। अनुच्छेद तथ्यात्मक या सुझावात्मक हो सकता है। अनुच्छेद लगभग 200 शब्दों का होगा। परीक्षक को सुनते–सुनते परीक्षार्थी अलग कागज पर दिये हुए श्रवण बोध के अभ्यासों को हल कर सकेंगे। अभ्यास रिक्त स्थान पूर्ति बहुविकल्पीय अथवा सत्य/असत्य का चुनाव आदि विधाओं में हो सकते हैं।

वचन (बोलना) का परीक्षण

1. चित्रों के क्रम पर आधारित वर्णन : इस भाग में अपेक्षा की जाएगी कि परीक्षार्थी विवरणात्मक भाषा का प्रयोग करें।
2. किसी चित्र का वर्णन : (चित्र लोगों के या स्थानों के हो सकते हैं।)
3. किसी निर्धारित विषय पर बोलना जिससे वह अपने व्यक्तिगत अनुभव का प्रत्यास्मरण कर सकें।
4. कोई कहानी सुनना या किसी घटना का वर्णन करना।

टिप्पणी :

1. परीक्षण से पूर्व परीक्षार्थी को तैयारी के लिए कुछ समय दिया जाय।
2. विवरणात्मक भाषा में वर्तमान काल का प्रयोग अपेक्षित है।
3. निर्धारित विषय परीक्षार्थी के अनुभव संसार के हों जैसे : कोई चुटकुला या हास्य–प्रसंग सुनाना, हाल में पढ़ी पुस्तक या देखे गये सिनेमा की कहानी सुनाना।
4. जब परीक्षार्थी प्रश्न पत्र प्रारम्भ कर दें तो परीक्षक कम से कम हस्तक्षेप करें।

कौशलों के अंतरण का मूल्यांकन

श्रवण (सुनना)	वाचन (बोलना)
1. विद्यार्थी में परिचित संदर्भों में प्रयुक्त शब्दों और पदों को समझने की सामान्य योग्यता है किन्तु सुसंबद्ध आशय को नहीं समझ पाता।	1. शिक्षार्थी केवल अलग–अलग शब्दों और पदों के प्रयोग की योग्यता प्रदर्शित करता है किन्तु एक सुसंबद्ध स्तर पर नहीं बोल सकता।
2. छोटे सम्बद्ध कथनों को परिचित संदर्भों में समझने की योग्यता है।	2. परिचित संदर्भों को केवल छोटे संबद्ध कथनों का सीमित शुद्धता से प्रयोग करता है।
3. परिचित या अपरिचित दोनों संदर्भों में कथित सूचना को स्पष्ट समझने की योग्यता है, अशुद्धियाँ करता है जिससे प्रेषण में रुकावट आती है।	3. अपेक्षाकृत दीर्घ भाषण में अधिक जटिल कथनों के प्रयोग की योग्यता प्रदर्शित करता है, अभी भी कुछ अशुद्धियाँ करता है जिनमें प्रेषण में रुकावट नहीं आती।
4. दीर्घ कथनों की शृंखला को पर्याप्त शुद्धता से समझता है और निष्कर्ष निकाल सकता है।	4. अपरिचित स्थितियों में विचारों को तार्किक ढंग से संगठित कर धारा प्रवाह रूप में प्रस्तुत कर सकता है ऐसी गलतियाँ करता है जिनसे प्रेषण में रुकावट नहीं आती।
5. जटिल कथनों के विचार–बिन्दुओं को समझने की योग्यता प्रदर्शित करता है, उद्देश्य के अनुकूल सुनने की कुशलता प्रदर्शित करता है।	5. उद्देश्य और श्रोत के लिए उपयुक्त शैली को अपना सकता है, केवल मामूली गलतियाँ करता है।

निर्धारित पुस्तकें :

1. क्षितिज–भाग 1
2. कृतिका–भाग 1
3. संस्कृत पाठ्य–पुस्तक – **विनोदिनी भाग -1**

निम्नलिखित पाठों का मूल्यांकन नहीं किया जायेगा :–

1– क्षितिज–भाग–1–
1. नाना साहब की पुत्री देवी मैना को भस्म कर दिया गया।
2. 'वाख'
3. प्रेमचन्द के फटे जूते

2– कृतिका–भाग–1–
1. मेरे संग की औरतें
2. किस तरह आखिरकार मैं हिन्दी में आया

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Class - IX

ENGLISH - LANGUAGE AND LITERATURE

One Paper **3 Hours** **Marks : 100**

SECTION A : READING **20 Marks**

1 & 2 Two unseen passages of total 500 words with a variety of questions including 4 marks for vocabulary.

Only prose passages will be used. One will be factual and the other will be literary.

Passage 1 - 200 words (8 marks) - Four or five comprehension questions

Passage 2 - 300 words (12 marks) - Four or five compehension questions and two questions on vocabulary.

Marks for vocabulary will not exceed 4.

SECTION B : WRITING **20 Marks**

3. **Letter Writing -** One letter in not more than 80 words based on provided verbal stimulus and context. Types of letter : Informal; Personal such as to family and friends. Formal : Letters of complaint, enquiry, request & application 08 Marks

4. Writing a short paragraph on a given outline/topic in about 60 words 04 Marks

5. Writing a short writing task based on a verbal and / or visual stimulus. (diagram, picture, graph, map, chart, flow chart etc.) Maximum words 80 08 Marks

SECTION C : GRAMMAR **15 Marks**

Questin No. 6-11

A variety of short questions involving the use of particular structures within a context. Text types used will include gap-filling, sentence-completion, sentence-reordering, dialogue-completion and sentence-transformation (including combining sentences). The Grammar syllabus will include the following areas in class IX :

1. Tenses (present with extension)
2. Modals (have to / had to, must, should, need, ought to and their negative forms)
3. Use of passive voice
4. Subject-verb concord
5. Reporting
   - (i) Commands and requests
   - (ii) Statements
   - (iii) Questions
6. Clauses :
   - (i) Noun clauses
   - (ii) Adverb Clauses of condition and time
   - (iii) Relative Clauses
7. Determiners, and
8. Prepositions

Note : No separate marks allotted for any of grammatical items listed above.

SECTION D : TEXT BOOKS **45 Marks**

Beehive - NCERT Textbook for Class IX

Prose **20 Marks**

12 & 13 Two extracts from different prose lessons included in Textbook (Approximately 100 words each) 5x2 = 10 Marks

These extracts chosen from different lessons will be literary and discursive in nature Each extract will be of 5 marks. One mark in each extract will be for vocabulary. 4 Marks in each passage will be used for testing local and global comprehension besides a question on interpretation.

14. **One out of two questions** extrapolative in nature based on any one of the prose lessons from Textbook to be answered in about 80 words. 06 Marks

15. One question on Drama Text (local and global comprehension question) (30-40 words) 04 Marks

Poetry **10 Marks**

16. One extract from a poem from the prescribed reader followed by two or three questions to test the local and global comprehension of the set text. The extract will carry four marks. 04 Marks

17. Two out of three short answer type questions on interpretation of themes and ideas 06 Marks

Moments - Supplementary Reader for Class IX **15 Marks**

18. One out of two questions from Supplementary Reader to interpret, evaluate and analyse character, plot or situations occurring in the lessons to be answered in about 100 words 08 Marks

19. One out of two very short answer type questions based on factual aspects of the lessons to be answered in 20-30 words 03 Marks

20. One out of two short answer type questions of interpretative and evaluative nature based on lessons to be answered in 30-40 words 04 Marks

2009–2010

Class - IX

संस्कृतपाठ्यक्रमः

एकं प्रश्नपत्रम् **पूर्णांकाः 100**

अवधि :–घण्टात्रयम्

क.	खण्डः	अपठित–अवबोधानम	15 अंकाः
ख.	खण्डः	रचनात्मकं कार्यम	20 अंकाः
ग.	खण्डः	अनुप्रयुक्त–व्याकरणम्	30 अंकाः
घ.	खण्डः	पठित– अवबोधानम	35 अंका

'क'. (अपठित–अवबोधनम्)

(सरलगद्यांशम् आधरितं कायर्म्–गद्यांशद्वयम्) **15 अंकाः**

1 40–50 शब्दपरिमितः सरलगद्यांशः **5 अंकाः**

सरलगद्यांशम् आधारितम् कायर्म्

- एकपदेन पूर्णवाक्येन च प्रश्नोत्तरकार्यम् 3 अंकाः
- अनुच्छेद–आधारित् भाषिककार्यम् 2 अंकाः

2. 80–100 शब्दपरिमितः गद्यांशः– सरलकथा घटनावर्णनं वा **10 अंकाः**

- एकपदेन पूर्णवाक्येन च प्रश्नोत्तराणि 6 अंकाः
- समुचितशीर्षकप्रदानम् 2 अंकाः
- अनुच्छेद–आधारितम् भाषिककार्यम् 2 अंकाः

भाषिककार्यम् इत्यनेन अभिप्रेतम् अस्ति

(i) वाक्ये कर्तृ – क्रियापदचयनम्

(ii) कर्तृक्रिया–अन्विितिः

(iii) विशेषणविशेष्यः–अन्विितिः

(iv) संज्ञास्थाने सर्वनामप्रयोगः अथवा सर्वनामस्थाने संज्ञाप्रयोगः

(v) पर्यायं विलोमं वा पदं दत्त्वा अनुच्छेदे दत्तं पदचयनम्

'ख'. (रचनात्मकं कार्यम्) 20 अंकाः

(अभ्यासपुस्तक–आधरितम्)

3. संकेताधारितम् अभिनन्दनपत्रम्/वर्धापनपत्रम्/निमन्त्रणपत्रम्/प्राचार्य प्रति प्रार्थनापत्रम् 5 अंकाः

4. संकेताधारितः वार्तालापः 5 अंकाः

5. संकेताधारिता लघुकथा, चित्रवर्णनम अनुच्छेदलेखनम् वा 10 अंकाः

'ग'. (अनुप्रयुक्त व्याकरणम्) 30 अंकाः

(अभ्यासपुस्तक आधरितम्)

6. संस्कृतवर्णमाला **5 अंकाः**

(अ) वर्ण – उच्चारणस्थानानि (3)

(ब) वर्तनी–वर्णसंयोजनम्, वर्णवियोजनम् (1+1)

7. वाक्येषु अनुच्छेदे वा सन्धिकार्यम् **5 अंकाः**

(अ) स्वरसन्धिः (2)

दीर्घः, गुणः, वृद्धिः, यण्

(ब) व्यंजनसन्धिः (2)

- म् स्थाने अनुस्वारः
- णत्वविधानम्
- वर्गीय–प्रथम – अक्षराणां तृतीयवर्णे परिवर्तनम्
- त् स्थाने च्
- र् पूर्वस्य रेफस्य लोपः दीर्घस्वरत्वं च
- त् स्थाने ल्

(स) विसर्गसन्धिः (1)

विसर्गस्य उत्वं, रत्वं, लोपः

विसर्गस्थाने स्, श्, ष्।

8. वाक्येषु शब्दरूपाणां प्रयोगाः **8 अंकाः**

अ. शब्दाः पुंल्लिङ्गाः **अजन्ताः :–** अकारान्ताः, बालकवत्, इकारान्ताः कविवत्

उकारान्ताः साधुवत्, ऋकारान्ताः पितृवत्/दातृवत।

हलन्ताः– राजन्, भवत्, आत्मन्, विद्वस्, गच्छत्। (3)

ब. स्त्रीलिङ्गाः **अजन्ताः–** आकारान्ताः रमावत्, इकारान्ताः मतिवत् (2)

ईकरान्ताः नदीवत्, ऋकारान्ताः मातृवत्

स. नपुसंकलिङ्गाः अजन्ताः– अकारान्ताः फलवत्, उकारान्ताः मधुवत् (1)

द. संख्यावाचकशब्दाः एक द्वि त्रि चतुर् पंचम् (1)

च. सर्वनामशब्दाः यत् तत् किम् इदम् त्रिषु लिंङ्गेषु, अस्मद् युष्मद् (1)

9. वाक्येषु धातुरूपाणां प्रयोगाः **6 अंकाः**

- धातुरूपाणि लट् लोट् लृट् लङ विधिलिङ्लकारेषु
- धातवः परस्मैपदिनः – भू (भव्) पठ् हस् नम् गम् (गच्छ) (3)

अस् हन् क्रुध् नश् नृत् आप् शक् इष् प्रच्छ् कृ, ज्ञा, भक्ष् चिन्त्

आत्मनेपदिनः– सेव्, लभ्, रुच्, मुद्, याच् (2)

उभयपदिनः– नी, ह्व, (हर्), भज्, पच (1)

10.	**उपपदविभक्तीनां प्रयोगाः**	**4 अंकाः**

(अनुच्छेदे, वार्तालापे, लघुकथायाम् वा)

द्वितीया – अभितः, परितः, उभयतः, समया, निकषा, प्रति, धिक्, विना।

तृतीया – विना, अलम्, सह, हीनः, किम्, प्रयोजनम्।

चतुर्थी – नमः, स्वाहा, अलम् सामर्थ्ये,

पंचमी – बहिः, विना, भी, आरभ्, प्र–मद्, परः, पूर्वम्, अनन्तरम्

षष्ठी – निधार्रणे, पुरतः, पृष्ठतः, वामतः, दक्षिणतः, अनादरे तरप्–तमप्, अधः।

सप्तमी – कुशलः, निपुणः, प्रवीणः, स्निह्, विश्वस् अनु–रज्, भावे।

11.	**प्रत्ययाः– तुमुन्, क्त्वा, ल्यप्, क्त, क्तवतु, शतृ, शानच्**	**2 अंकाः**

(वाक्येषु प्रयोगाः)

'घ' (पठित –अवबोधनम्) — 35 अंकाः

12.	**पठित–सामग्रीम् आधारितम् अवबोधनकार्यम्**	
	एकः गद्यांशः	5 अंकाः
	एकः पद्यांशः	5 अंकाः
	एकः नाट्यांशः	5 अंकाः

प्रतिखण्डम् अधिकृत्य अवबोधनकार्यम् एकपदेन, पूर्णवाक्येन च प्रश्नोत्तराणि, रिक्तस्थानपूर्तिः, कः कं कथयति, सर्वनामप्रयोगेः, शब्दार्थाःध्य

13.	**भावावबोधनम् (अंशद्वयम्)**	**3+3 अंकाः**

रिक्तस्थानेन, विकल्पचयनेन, शुद्ध–अशुद्धमाध्यमेन, समभावसूक्तिमाध्यमेन वा

14.	**अन्वयेषु रिक्तस्थानपूर्तिः**	**3 अंकाः**
15.	**प्रश्ननिर्माणम् (चत्वारः)**	**4 अंकाः**

(वाक्येषु रेखांकितपदम् आधृत्य)

16.	**कथाक्रम–संयोजनम्**	**4 अंकाः**

(क्रमरहित–अष्टवाक्यानां क्रमपूर्वकं संयोजनम्)

17.	**सन्दर्भे शब्दप्रयोगाः शब्दार्थमलेनं वा**	**3 अंकाः**

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Class - IX

SOCIAL SCIENCE

Time : 3 Hours	Marks : 80+20
UNITS	**MARKS**
1. India and the Contemporary World - I	18
2. India -Land and the People	20
3. Democratic Politics	18
4. Understanding Economics	16
5. Disaster Management	08
Internal Assessment	
1. Tests (Formative and Summative)	10
2. Assignments (School & Home)	05
3. Project Work	05

Unit 1 : India and the Contemporary World - I

Themes	Objectives
Any two themes from each of the first two sub-units and one from the third could be studied. **Sub-unit 1.1 : Events and processes.** In this unit the focus is on three events and processes that have in major ways shaped the identity of the modern world. Each represents a different form of politics, and a specific combination of forces. One event is linked to the growth of liberalism and democracy, one with socialism, and one with a negation of both democracy and socialism. **1. French revolution :** (a) The Ancient Regime and its crises. (b) The social forces that led to the revolution. (c) The different revolutionary groups and ideas of the time. (d) The legacy.	• In each of the themes in this unit students would be made familiar with extracts of speeches, political declarations, as well as the politics of caricatures, posters and engravings. Students would learn how to interpret these kinds of historical evidences. • Familiarize students with the names of people involved, the different types of ideas that inspired the revolution, the wider forces that shaped it. • Show how written, oral and visual material can be used to recover the history of revolutions. • Explore the history of socialism through a study of the Russian revolution.

2. Russian Revolution. (a) The crises of Tzarism. (b) The nature of social movements between 1905 and 1917. (c) The First World War and foundation of Soviet state. (d) The legacy.	• Familiarize students with the names of people involved, the different types of ideas that inspiredthe revolution. • Discuss the critical significance of Nazism in shaping the politics of modern world.
3. Rise of Nazism. (a) The growth of social democracy (b) The crises in Germany. (b) The basis of Hitler's rise to power. (c) The ideology of Nazism. (d) The impact of Nazism.	• Familiarize students with the speeches and writings of Nazi leaders.
Sub-unit 1.2 : Economies and Livelihoods The themes in this section will focus on how different social groups grapple with the changes in the contemporary world and how these changes affect their lives.	
4. Pastoralists in the modern world. (a) Pastoralism as a way of life. (b) Different forms of pastoralism. (c) What happens to pastoralism under colonialism and modern states? Case studies : focus on two pastoral groups, one from Africa and one from India.	• Consider what happens to pastoralists and pastoralism in the modern world, with the formation of modern states, marking of boundaries, processes of sedentarization,contraction of pastures, and expansion of markets. • Point to the varying patterns of developments within pastoral societies in different places.
5. Forest society and colonialism : (a) Relationship between forests and livelihoods. (b) Changes in forest societies under colonialism. Case studies : focus on two forest movements one in colonial India (Bastar) and one in Indonesia.	• Look at the impact of colonialism on forest societies, and the implication of scientific forestry. • Discuss the social and cultural world of forest communities through the study of specific revolts. • Understand how oral traditions can be used to explore tribal revolts.
6. Farmers and peasants : (a) Histories of the emergence of different forms of farming and peasant societies. (b) Changes within rural economies in the modern world. Case studies: focus on contrasting forms of rural change and different forms of rural societies (expansion of large-scale wheat and cotton farming in USA, rural economy and the	• Show the different processes through which agrarian transformation may occur in the modern world. • Understand how agricultural systems in India are different from that in other countries. • Familiarize students with the idea that large scale farming, small scale production, shifting agriculture operate on different principles and have

Agricultural Revolution in England. and small peasant production in colonial India) **Sub-unit 1.3 : Culture, Identity and Society** The themes in this unit will consider how issues of culture are linked up to the making of contemporary world. **7. Sports and politics :** The story of cricket (a) The emergence of cricket as an English sport. (b) Cricket and colonialism. (c) Cricket nationalism and de-colonialization. **8. Clothes and cultures.** (a) A short history of changes in clothing. (b) Debates over clothing in colonial India. (c) Swadeshi and the movement for Khadi. **Sub-unit 1.4 : Map Work. (2 Marks).**	different histories. • Suggest how sports also have a history and that it is linked up with the politics of power and domination. • Introduce students to some of the stories in cricket that have historical significance. • Show how clothing has a history, and how it is linked to questions of cultural identity. • Discuss how clothing has been the focus of intense social battles

Unit 2 : India - Land and the People

Themes	Objectives
1. **India** : location, relief, structure, major physiographic units.	To understand the major landform features and the underlying geological structure; their association with various rocks and minerals as well as nature of soil types
2. **Climate** : factors influencing the climate; monsoon- its characteristics, rainfall and temperature distribution; seasons; climate and human life.	To identify the various factors influencing the climate and explain the climatic variaton of our country and its impact on the life of the people. Tor explain the importance and unifying role of monsoons;
3. **Drainage** : major rivers and tributaries, lakes and seas, role of rivers in the economy, pollution of rivers, measures to control river pollution.	To understand the river systems of the country and explain the role of rivers in the evolution of human society.
4. **Natural Vegetation** : vegetation types, distribution as well as altitudinal variation, need for conservation and various measures.	To find out the nature of diverse flora and fauna as well as their distribution;
5. **Wildlife** : major species, their distribution, need for conservation and various measures.	To develop concern about the need to protect the bio-diversity of our country;
6. **Population** : size, distribution, age-	To analyse the uneven nature of population

sex composition, population change-migration as a determinant of population change, literacy, health, occupational structure and national population policy : adolescents as under-served population group with special needs. 7. **Map Work** (4 marks).	distribution and show concern about the large size of our population; To understand the various occupations of people and explain various factors of population change; To explain various dimension of national policy and understand the needs of adolescents as underserved group.

Project/Activity

Learners may identify songs, dances, festivals and special food preparations associated with certain seasons in their particular region, and whether they have some commonality with other regions of India.

Collection of material by learners on the flora and fauna of the region in which their school is situated. It should include a list of endangered species of the region and also information regarding efforts being made to save them.

Posters

River pollution

Depletion of forests and ecological imbalance.

Unit 3 : Democratic Politics - I

Themes	Learning Objectives
1. What is democracy? Why democracy? What are the different ways of defining democracy? Why has democracy become the most prevalent form of government in our times? What are the alternatives to democracy? Is democracy superior to its available alternatives? Must every democracy have the same institutions and valules?	• Develop conceptual skills of defining democracy • Understand how different historical processes and forces have promoted democracy. • Developing a sophisticated defence of democracy against common prejudices • Develop a historical sense of the choice and nature of democracy in India.
2. Designing of Democracy in India How and why did India become a democracy? How was the Indian constitution framed? What are the salient features of the Constitution? How is democracy being constantly designed and redesigned in India?	• Introduction to the process of Constitution making • Develop respect for the Constitution and appreciation for Constitutional values • Recognise that constitution is a living document that undergoes changes. • Introduce the idea of representative democracy via competitive party politics
3. Electoral politics in democracy	• Familiarise with our electoral system

Why and how do we elect representatives? Why do we have a system of competition among political parties? How has the citizens' participation in electoral politics changed? What are the ways to ensure free and fair elections?	and reasons for choosing this • Develop an appreciation of citizen's increased participation in electoral politics • Recognise the significance of the Election Commission
4. Institutions of parliamentary democracy How is the country governed? What does Parliament do in our democracy? What is the role of the President of India, the Prime Minister and the Council of Ministers? How do these relate to one another?	• Provide an overview of central governmental structures • Sensitise to the key role of the Parliament and its procedures • Distinguish between nominal and real executive authorities and functions • Understand the parliamentary system of executive's accountability to the legislature
5. Citizens' rights in democracy Why do we need rights in a constitution? What are the Fundamental Rights enjoyed by the citizen under the Indian constitution? How does the judiciary protect the Fundamental Rights of the citizen? How is the independence of the judiciary ensured?	• Develop a citizens' awareness of their rights • Introduction to and appreciation of the Fundamental Rights • Recognition of the ways in which these rights are exercised and denied in real life situations. • Introduction to judicial system and key institutions like the Supreme Court, High Courts and National Human Rights Commission.

Unit - 4 : Understanding Economics – I

Themes	Objectives
1. The economic story of Palampore: Economic transactions of Palampore and its interaction with the rest of the world through which the concept of production (including three factors of production (land, labour and capital) can be introduced.	Familiarising the children with some basic economic concepts through an imaginary story of a village
2. People as Resource : Introduction of how people become resource/asset; economic activities done by men and women; unpaid work done by women; quality of human resource; role of health and education; unemployment as a form of nonutilisation of human resource; sociopolitical implication in simple form	Familiarisation of a few population related concepts and sensitization of child that people as asset can participate and contribute in nation building
3. Poverty as a challenge facing India : Who is poor (through two case studies one rural	Understanding of poverty as a challenge and

one urban); indicators; absolute poverty (not as a concept but through a few simple examples) - why people are poor ; unequal distribution of resources; comparison between countries; steps taken by government for poverty alleviation	sensitization of the learner; Appreciation of the government initiative to alleviate poverty
4. Food Security : Source of foodgrains- variety across the nation - famines in the past- the need for self sufficiency-role of government in food security - procurement of foodgrains-overflowing of granaries and people without food-public distribution system - role of cooperatives in food security (foodgrains, milk and vegetables ration shops, cooperative shops, two-three examples as case studies)	Exposing the child to an economic issue which is basic necessities of life; Appreciate and critically look at the role of government in ensuring food supply

Suggested Activities / Instructions :

Theme I : Give more examples of activities done by different workers and farmers.

Numerical problems can also be included.

Some of the ways through which description of villages are available in the writings of Prem Chand, MN Srinivasand RK Narayan. They may have to be referred.

Theme II : Discuss the impact of unemployment

Debate on whether all the activities done by women should be included or not. Why?

Is begging an economic activity? Discuss.

Is it necessary to reduce population growth or family size? Discuss.

Theme IV : Visit a few farms in a village and collect the details of foodgrains cultivated;

Visit a nearby ration shop and collect the details of goods available;

Visit a regulated market yard and observe how goods are transacted and get the details of the places where the

goods come and go.

Unit - 5 : Disaster Management

1. **Man made disasters** - Nuclear, Biological and Chemical.
2. **Common Hazards** - Prevention and Mitigation
3. **Community Based Disaster Management.**

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Class - IX

SCIENCE

COURSE STRUCTURE

(THEORY)

One Paper	Time : 3 Hours	Marks : 60
UNITS		MARKS
I. Food		05
II. Matter - Its nature and behaviour		15
III. Organisation in living world		13
IV. Motion, Force and Work		20
V. Our Environment		07
TOTAL		60

Theme : Food

Unit 1 : Food

Plant and animal breeding and selection for quality improvement and management ; use of fertilizers, manures; protection from pests and diseases; organic farming.

Theme : Materials

Unit 2 : Matter - Nature and behaviour

Definition of matter; solid, liquid and gas; characteristics - shape, volume, density; change of state-melting (absorption of heat), freezing, evaporation (Cooling by evaporation), condensation, sublimation.

Nature of matter : Elements, compounds and mixtures. Heterogenous and homogenous mixtures, colloids and suspensions.

Particle nature, basic units : atoms and molecules. Law of constant proportions. Atomic and molecular masses.

Mole Concept : Relationship of mole to mass of the particles and numbers. Valency. Chemical formula of common compounds.

Structure of atom : Electrons, protons and neutrons; Isotopes and isobars.

Theme : The World of the living

Unit 3 : Organization in the living world.

Biological Diversity : Diversity of plants and animals - basic issues in scientific naming, basis of classification. Hierarchy of categories / groups, Major groups of plants (salient features) (Bacteria, Thalophyta, Bryo phyta, Pteridophyta, gymnosperms and

Angiosperms). Major groups of animals (salient features) (Non-chordates upto phyla and chordates upto classes).

Cell - Basic Unit of life : Cell as a basic unit of life; prokaryotic and eukaryotic cells, multicellular organisms; cell membrane and cell wall, cell organelles; chloroplast, mitochondria, vacuoles, ER, golgi apparatus; nucleus, chromosomes - basic structure, number.

Tissues, organs, organ systems, organism.

Structure and functions of animal and plant tissues (four types in animals; merismatic and permanent tissues in plants).

Health and diseases : Health and its failure. Infectious and Non-infectious diseases, their causes and manifestation.

Diseases caused by microbes (Virus, Bacteria and Protozoans) and their prevention, Principles of treatment and prevention. Pulse polio programmes.

Theme : Moving things, people and ideas

Unit 4 : Motion, Force and Work

Motion : Distance and displacement, velocity; uniform and non-uniform motion along a straight line; acceleration, distance-time and velocity-time graphs for uniform and uniformly accelerated motion, equations of motion by graphical method; elementary idea of uniform circular motion.

Force and Newton's laws : Force and motion, Newton's laws of motion, inertia of a body, inertia and mass, momentum, force and acceleration. Elementary idea of conservation of momentum, action and reaction forces.

Gravitation : Gravitation; universal law of gravitation, force of gravitation of the earth (gravity), acceleration due to gravity; mass and weight; free fall.

Floatation : Thrust and pressure. Archimedes' principle, buoyancy, elementary idea of relative density.

Work, Energy and Power : Work done by a force, energy, power; kinetic and potential energy; law of conservation of energy.

Sound : Nature of sound and its propagation in various media, speed of sound, range of hearing in humans; ultrasound;

reflection of sound; echo and SONAR.

Structure of the human ear (auditory aspect only).

Theme : Natural Resources

Unit 5 : Our Environment

Physical resources : Air, Water, Soil.

Air for respiration, for combustion, for moderating temperatures, movements of air and its role in bringing rains across India.

Air, water and soil pollution (brief introduction). Holes in ozone layer and the probable damages.

Bio-geo chemical cycles in nature : water, oxygen, carbon, nitrogen

PRACTICALS

LIST OF EXPERIMENTS

Marks : 40 (20 + 20)

1. **To prepare**
   a) a true solution of common salt, sugar and alum
   b) a suspension of soil, chalk powder and fine sand in water
   c) a colloidal of starch in water and egg albumin in water and distinguish between these on the basis of
      i) transparency
      ii) filtration criterion
      iii) stability
2. To prepare
   a) a mixture
   b) a compound

   using iron filings and sulphur powder and distinguish between these on the basis of :
      i) appearance i.e., homogeneity and heterogeneity
      ii) behaviour towards a magnet
      iii) behaviour towards carbon disulphide as a solvant.
      iv) effect of heat.
3. To carry out the following chemical reactions and record observations. Also identify the type of reaction involved in each case.
   i) Iron with copper sulphate solution in water.
   ii) Burning of Magnesium in air.
   iii) Zinc with dilute sulphuric acid
   iv) Heating of Lead Nitrate
   v) Sodium sulphate with Barium chloride in the form of their solutions in water.
4. To verify laws of reflection of sound.
5. To determine the density of solid (denser than water) by using a spring balance and a measuring cylinder.
6. To establish the relation between the loss in weight of a solid when fully immersed in
   i) tap water
   ii) strongly salty water, with the weight of water displaced by it by taking at least two different solids.
7. To measure the temperature of hot water as it cools and plot a temperature-time graph.
8. To determine the velocity of a pulse propagated through a stretched string/slinky.

9. To prepare stained temporary mounts of (a) onion peel and (b) human cheek cells and to record observations and draw their labeled diagrams.

10. To identify parenchyma and sclerenchyma tissues in plants, striped muscle fibers and nerve cells in animals, from prepared slides and to draw their labeled diagrams.

11. To separate the components of a mixture of sand, common salt and ammonium chloride (or camphor) by sublimation.

12. To determine the melting point of ice and the boiling point of water.

13. To test (a) the presence of starch in the given food sample (b) the presence of the adulterant metanil yellow in dal.

14. To study the characteristic of spirogyra/Agaricus, Moss/Fern, Pinus (either with male or female conre) and an Angiospermic plant. Draw and give two identifying features of groups they belong to.

15. To observe and draw the given specimens—earthworm, cockroach, bony fish and bird. For each specimen record

    (a) one specific feature of its phylum

    (b) one adaptive feature with reference to its habitat.

SCHEME OF EVALUATION

Multiple choice type question written test (School based) : 20 Marks

Hands-on practicals examination (school based) : 20 Marks

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Class - IX

MATHEMATICS

Course Structure

One Paper	Time : 3 Hours	Marks : 80
UNITS		**MARKS**
I. NUMBER SYSTEMS		**06**
II. ALGEBRA		**20**
III. COORDINATE GEOMETRY		**06**
IV. GEOMETRY		**22**
V. MENSURATION		**14**
VI. STATISTICS AND PROBABILITY		**12**
TOTAL		**80**

UNIT I : NUMBER SYSTEMS

1. REAL NUMBERS

Review of representation of natural numbers, integers, rational numbers on the number line. Representation of terminating / non-terminating recurring decimals, on the number line through successive magnification.Rational numbers as recurring/terminating decimals.

Examples of nonrecurring / non terminating decimals such as $\sqrt{2}$, $\sqrt{3}$, $\sqrt{5}$ etc. Existence of non-rational numbers (irrational numbers) such as $\sqrt{2}$, $\sqrt{3}$, and their representation on the number line. Explaining that every real number is represented by a unique point on the number line and conversely, every point on the number line represents a unique real number.

Existence of $\sqrt{x}$ for a given positive real number x (visual proof to be emphasized).

Definition of nth root of a real number.

Recall of laws of exponents with integral powers. Rational exponents with positive real bases (to be done by particular cases, allowing learner to arrive at the general laws.)

Rationalization (with precise meaning) of real numbers of the type (& their combinations)

$\frac{1}{a + b\sqrt{x}}$ & $\frac{1}{\sqrt{x} + \sqrt{y}}$ where x and y are natural number and a, b are integers.

UNIT II : ALGEBRA

1. POLYNOMIALS

Definition of a polynomial in one variable, its coefficients, with examples and counter examples, its terms, zero polynomial. Degree of a polynomial. Constant, linear, quadratic, cubic polynomials; monomials, binomials, trinomials. Factors and multiples. Zeros/roots of a polynomial / equation. State and motivate the Remainder

Theorem with examples and analogy to integers. Statement and proof of the Factor Theorem. Factorization of $ax^2 + bx + c$, $a \neq 0$ where a, b, c are real numbers, and of cubic polynomials using the Factor Theorem.

Recall of algebraic expressions and identities. Further identities of the type $(x + y + z)^2 = x^2 + y^2 + z^2 + 2xy + 2yz + 2zx$, $(x \pm y)^3 = x^3 \pm y^3 \pm 3xy\,(x \pm y)$.

$x^3 + y^3 + z^3 - 3xyz = (x + y + z)\,(x^2 + y^2 + z^2 - xy - yz - zx)$ and their use in factorization of polymonials. Simple expressions reducible to these polynomials.

2. LINEAR EQUATIONS IN TWO VARIABLES

Recall of linear equations in one variable. Introduction to the equation in two variables. Prove that a linear equation in two variables has infinitely many solutions and justify their being written as ordered pairs of real numbers, plotting them and showing that they seem to lie on a line. Examples, problems from real life, including problems on Ratio and Proportion and with algebraic and graphical solutions being done simultaneously.

UNIT III : COORDINATE GEOMETRY

1. COORDINATE GEOMETRY

The Cartesian plane, coordinates of a point, names and terms associated with the coordinate plane, notations, plotting points in the plane, graph of linear equations as examples; focus on linear equations of the type $ax + by + c = 0$ by writing it as $y = mx + c$ and linking with the chapter on linear equations in two variables.

UNIT IV : GEOMETRY

1. INTRODUCTION TO EUCLID'S GEOMETRY

History - Euclid and geometry in India. Euclid's method of formalizing observed phenomenon into rigorous mathematics with definitions, common/obvious notions, axioms/postulates and theorems. The five postulates of Euclid. Equivalent versions of the fifth postulate. Showing the relationship between axiom and theorem.

1. Given two distinct points, there exists one and only one line through them.
2. (Prove) two distinct lines cannot have more than one point in common.

2. LINES AND ANGLES

1. (Motivate) If a ray stands on a line, then the sum of the two adjacent angles so formed is 180^0 and the converse.
2. (Prove) If two lines intersect, the vertically opposite angles are equal.
3. (Motivate) Results on corresponding angles, alternate angles, interior angles when a transversal intersects two parallel lines.
4. (Motivate) Lines, which are parallel to a given line, are parallel.

5. (Prove) The sum of the angles of a triangle is 180^0.

6. (Motivate) If a side of a triangle is produced, the exterior angle so formed is equal to the sum of the two interiors opposite angles.

3. TRIANGLES

1. (Motivate) Two triangles are congruent if any two sides and the included angle of one triangle is equal to any two sides and the included angle of the other triangle (SAS Congruence).
2. (Prove) Two triangles are congruent if any two angles and the included side of one triangle is equal to any two angles and the included side of the other triangle (ASA Congruence).
3. (Motivate) Two triangles are congruent if the three sides of one triangle are equal to three sides of the other triangle (SSS Congruene).
4. (Motivate) Two right triangles are congruent if the hypotenuse and a side of one triangle are equal (respectively) to the hypotenuse and a side of the other triangle.
5. (Prove) The angles opposite to equal sides of a triangle are equal.
6. (Motivate) The sides opposite to equal angles of a triangle are equal.
7. (Motivate) Triangle inequalities and relation between 'angle and facing side' inequalities in triangles.

4. QUADRILATERALS

1. (Prove) The diagonal divides a parallelogram into two congruent triangles.
2. (Motivate) In a parallelogram opposite sides are equal, and conversely.
3. (Motivate) In a parallelogram opposite angles are equal, and conversely.
4. (Motivate) A quadrilateral is a parallelogram if a pair of its opposite sides is parallel and equal.
5. (Motivate) In a parallelogram, the diagonals bisect each other and conversely.
6. (Motivate) In a triangle, the line segment joining the mid points of any two sides is parallel to the third side and (motivate) its converse.

5. AREA

Review concept of area, recall area of a rectangle.

1. (Prove) Parallelograms on the same base and between the same parallels have the same area.
2. (Motivate) Triangles on the same base and between the same parallels are equal in area and its converse.

6. CIRCLES

Through examples, arrive at definitions of circle related concepts, radius, circumference, diameter, chord, arc, subtended angle.

1. (Prove) Equal chords of a circle subtend equal angles at the center and (motivate) its converse.

2. (Motivate) The perpendicular from the center of a circle to a chord bisects the chord and conversely, the line drawn through the center of a circle to bisect a chord is perpendicular to the chord.
3. (Motivate) There is one and only one circle passing through three given non-collinear points.
4. (Motivate) Equal chords of a circle (or of congruent circles) are equidistant from the center(s) and conversely.
5. (Prove) The angle subtended by an arc at the center is double the angle subtended by it at any point on the remaining part of the circle.
6. (Motivate) Angles in the same segment of a circle are equal.
7. (Motivate) If a line segment joining two points subtendes equal angle at two other points lying on the same side of the line containing the segment, the four points lie on a circle.
8. (Motivate) The sum of the either pair of the opposite angles of a cyclic quadrilateral is 180o and its converse

7. CONSTRUCTIONS

1. Construction of bisectors of line segments & angles, 60^o, 90o, 45^o angles etc., equilateral triangles.
2. Construction of a triangle given its base, sum/difference of the other two sides and one base angle.
3. Construction of a triangle of given perimeter and base angles.

UNIT V : MENSURATION

1. AREAS

Area of a triangle using Hero's formula (without proof) and its application in finding the area of a quadrilateral.

2. SURFACE AREAS AND VOLUMES

Surface areas and volumes of cubes, cuboids, spheres (including hemispheres) and right circular cylinders/ cones.

UNIT VI : STATISTICS AND PROBABILITY

1. STATISTICS

Introduction to Statistics : Collection of data, presentation of data — tabular form, ungrouped / grouped, bar graphs, histograms (with varying base lengths), frequency polygons, qualitative analysis of data to choose the correct form of presentation for the collected data. Mean, median, mode of ungrouped data.

2. PROBABILITY

History, Repeated experiments and observed frequency approach to probability. Focus is on empirical probability. (A large amount of time to be devoted to group and to individual activities to motivate the concept; the experiments to be drawn from real - life situations, and from examples used in the chapter on statistics).

INTERNAL ASSESSMENT **20 Marks**

Evaluation of activities 10 Marks

Project Work 05 Marks
Continuous Evaluation 05 Marks

2009—2010

Class - IX

HOME SCIENCE

One Theory paper **Time : 3 Hours** **75 Marks**

Unit I: Concept and Scope of Home Science. **05**

Unit II : **Family-a unit of society** : Type & size of family; reasons for change in family types, effect of size on welfare of its members, role of family members in its smooth functioning. **10**

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

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

Unit IV: **Methods of cooking :** boiling, steaming, pressure cooking, frying, roasting & baking brief description of each & suitability for foods. **10**

Unit V: **Functions of a home :** protective and social characteristics of functional house-security, light, ventilation, sanitation (brief description of disposal of waste water, garbage and human excreta) & surroundings. **10**

Unit VI : **Safety in the house :** prevention of accidents in the kitchen and bathroom-cuts, falls, burns, electric shock, poisoning,safe use of fuels; first-aid given to cuts, bruises,burns, scalds, poisoning,shocks & bites. **10**

UnitVII : **Fabrics available in the market :** Definition of fibre and yarn; classfication of fibre on the basis of origin and length; yarn making, blends,construction of fabric-weaving (Different types of weaves-plain, twill and stain), felting and knitting; characterstics of fibres-length, durability, absorbancy, heat conductivity resilence and elasticity; effect of heat, moth and mildew, acids and alkalis. **14**

Unit VIII : **Selection of clothes :** factors affecting selection

(i) fabric related factors (characteristics of fibre, fabric construction)
(ii) person related factors-age, occupation occasion, fashion, figure, comfort
(iii) Other factors-climate & cost **06**

Practicals **25**

1. Observe your own family for -type, size & role of each member. Record the activities of all members on any one typical day of the family.
2. Observe food preparation using different methods and record taste, texture, colour of ready food.
3. Prepare food using different methods of cooking.
4. Study your own house for light ventilation, disposal of waste water and surroundings and record your observations.
5. Study your house for measures of safety against accidents and give suggestions for improvement.
6. Practice giving first aid to cuts, burns, fevers, scalds and bites.

7. Collect samples of fabrics available in the market and present a comparative picture on the basis of cost (optional), durability, appearance and suitability.
8. Identification of fabric-physical appearance and burning test.

2009—2010

Class - IX

ADDITIONAL SUBJECT

(1) HINDUSTANI MUSIC (VOCAL)

Time : 2 Hours

Theory **25 Marks**

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

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

PRACTICAL **75 Marks**

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

(II) HINDUSTANI MUSIC (MELODIC INSTRUMENTS)

Time : 2 Hours

Theory **25 Marks**

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

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

PRACTICAL **75 Marks**

1. Proficiency in any one of the following instruments :

   (i) Sitar, (ii) Sarod, (iii) Violin, (iv) Dilruba or Esraj (v) Flute (vi) Mandolin, (vii) Guitar.
2. (a) The tune of National Anthem.

   (b) Four light Dhuns and four folk dhuns of different regions.

3. Aaroha, Avaroha, Pakad and Drut gat in the following Ragas; Yaman, Bhairav, Bhopali with few Todas.
4. The recitation of Thekas of Teen Taal, Keharwa, Dadra and Jhaptal, taal keeping with hand beats.

(III) HINDUSTANI MUSIC (PERCUSSION-INSTRUMENTS)

Time : 2 Hours

Theory **25 Marks** 1. An outline history of Indian Music

2. Definition of the following:

Sangeet, Nada, Swara, Shuddha, Vikrit (Komal, Teevra) Raga, Laya, Tala, Matra, Vibhag, Sama, Tali Avartana, Dugun, Tigun, Chaugun.

PRACTICAL **75 Marks**

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

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

(IV) CARNATIC MUSIC (VOCAL)

Time : 2 Hours

Theory **25 Marks** 1. Definition of the following terms:

Sangeeta, Nada, Svara, Svarsthana, Aroha, Avaroha, Sruti, Tala, Laya, Alankara, Sthayi, Graha, Dhatu, Matu, Sudha and Vikrta, Svara, Poorvaanga, Utharanga, Vadi Samvadi, Anuvadi, Vivadi, Sama, Atita, Anagata, Anyasvara, Raaga

2. Brief outline of Ragalakshana of the following :

Mayamalavagaula, Mohanam, Kalyani, Malahari and Bilahari

3. Lakshanas of the following musical forms:

Geetam, Svarajati.

4. Basic knowledge of the following Talas:

Aadi, Rupaka, Chapu.

5. An outline history of Indian Music, including the biography of Purandaradaasa and Tyaagaraaja.

. **PRACTICAL** **75 Marks**

1. Community Singing:

(a) National Anthem

(b) Five folk or tribal songs of any region indicating time of the year and occasion with which they are related.

2. Voice-culture exercises for Sruti Suddha and Sthan Sudha, sapta tala alankaras in Mayamalawa gowla.

3. Arohana and Avarohana of the following Ragas with brief Raga lakshana :
   Mayamalawagaula, Mohanam, Malahari, Bilahari, Kalyahi.
4. Singing of simple Devernamas, Geetam, Svarajati and simple bhajans, to the accompaniment of Tambura and Mridangam.
5. Rendition of Adi, rupaka and chapu talas

(V) CARNATIC MUSIC (MELODIC INSTRUMENTS)

Time : 2 Hours

Theory **25 Marks**

1. Knowledge of the following terms :
   Sangita, Nada, Svara, Svarsthana, Arohana, Avarohana, Aavarta, Sruti, Sthayi, Graha or Eduppu, Dhaatu, Maatu Sama, Kaala or Degrees of Speed, Suddha Svara Vikrita, Svara, Sangati Poorvaanga, Uttaranga, Vadi, Samvadi, Anuvadi, Vivadi, Atita, Anagata, Anya svara.
2. Raaga Lakshanaas Outlines of :
   Mayamalavogowla, Sankarabharanam, Kalyani, Hamsadhvani.
3. Lakshanas of the musical forms geetam and svarajati.
4. Taalas : Aadi, Roopakam and Chaapu.
5. An outlines story of Indian Music including the biography of Purandaradaasa and Tyaagaraaja.

PRACTICAL **75 Marks**

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

(VI) CARNATIC MUSIC (PERCUSSION-INSTRUMENTS)

Time : 2 Hours

Theory **25 Marks**

1. Knowledge of the following terms:
   Sangita, Nada, Svara, Svarasthana, Arohana, Avarohana, Aavarta, Sruti, Sthayi, Graha or Eduppu,Dhaatu, Maatu, Sama, Kaala or Degrees of Speed, Suddha Svara, Vikrta, Svara, Sangati, Poorvaanga, Uttaranga, Vadi, Samvadi, Anuvadi, Vivadi, Atita, Anagata, Anya Svara.
2. Raga Laksanas Outlines of :
   Mayamaalavagowla, Sankarabharanam, Kharaharapriya, Hamsadhvani.
3. Lakshanaas of the musical forms geetam, Svarajati and Varnam.
4. Taalas : Adi, Roopakam and Chaapu.
5. An outline history of Indian Music including the biography of Purandaradaasa and Tyaagaraaja

PRACTICAL **75 Marks**

1. To acquire proficiency in playing on the Mridangam both for Solo and Accompanying purposes.

Also to learn to handle a few other percussion instruments, such as the Ghatam, the Kanjeera and the Moresing.

1. To participate in community singing
2. Stress to be laid on creating and developing proper sense of rhythm.
3. To recite "Sollukettus" for the different talas.

PAINTING

Theory **Time : 3 Hours** **100 Marks**

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

ELEMENTS OF BUSINESS

Theory **Time : 3 Hours** **100 Marks**

I.	*Introductory:* Meaning and scope of business	**05**
II.	*Channels of distribution:* Types and functions of wholesaler and retailer	**20**
III.	*Course of Business Transactions:* Buying and selling of goods, methods of approaching customers; enquiries and quotations, price list, tenders, estimates and firm offers, general terms of sale, quality, price, packing, delivery, transfer of ownership and payments; preparing of invoice Debit note and Credit note	**20**
IV.	*Mercantile Agents:* Kinds of agents and their functions, commission agents, factor and broker, Del Credere agents, bought note and sold note, Preparation of Account sales.	**20**
V.	*Warehousing and storekeeping:* Meaning, purpose, functions and kinds	**15**
VI.	*Transportation of goods:* rail, road, sea and air transport, comparative merits	**20**
VII.	Insurance: General Principles of Insurance-Elementary exposure	

ELEMENTS OF BOOK-KEEPING AND ACCOUNTANCY

Theory **Time : 3 Hours** **100 Marks**

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

I.	*Introduction :* Need for Book-Keeping, Ojectivies and advantages of Book-keeping.	**14**
II.	*Basic concepts :* Dual aspect of transactions and the accounting equation, Effect of transaction on Accounting equations, Business entity concept.	**14**
III.	Nature of Accounts and Rules for debit and credit : Classification of accounts, Rules for debit and credit, Preparation of vouchers and supporting documents	**14**
IV.	*Journal* : Need for journal; Journal entries; Subsidiary books.	**14**
V.	Ledger : Definition and importance; relation between journal and ledger; Meaning of posting, guiding rule for posting transactions, balancing of accounts	**14**

VI. *Recording and posting of cash transactions :* Necessity of cash book-types of cash books-petty cash books and imprest system, journal proper. **15**

VII. *Trial balance :* Purpose, methods and limitations **15**

2009—2010

Class – IX

Typewriting-English or Hindi (Theory)

Time : 2 Hours

One Paper **Marks : 25**

Knowledge of Key Board
Methods and Principles of Typewriting
Touch system of Typewriting
Knowledge about mechanisation of the Typewriter-Its different parts
Maintenance of Typewriter

One Practical Paper **Time : 1 Hours** **Marks : 75**

1. **Speed Test (15 words per minute)** **Marks : 30 Time : 10 Minutes**

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

2. **Accuracy Test** **Marks: 45 Time : 40 Minutes**

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

2009—2010

Class - IX

कृषि विज्ञान

पाठ्यक्रम (सैद्धान्तिक)

केवल प्रश्न पत्र　　समय – 3 घण्टे　　पूर्णांक – 60

यूनिट	अंक
• जलवायु विज्ञान	12
• मृदायें	12
• सिंचाई एवं जल निकास	15
• खाद तथा उर्वरक	12
• कर्षण	09

1. इकाई 1 – जलवायु विज्ञान – 12 अंक

क– उत्तराखण्ड तथा भारत में मौसम और ऋतुऐं।
ख– फसलों पर अनुकूल तथा प्रतिकूल मौसम का प्रभाव।
ग– वर्षा उसमें वार्षिक तथा ऋतुगत परिवर्तन।
घ– वर्षा के वितरण का फसलों तथा कृषि क्रियाओं पर प्रभाव।

2. इकाई 2 – मृदायें – 12 अंक

क– मृदा निर्माण, मृदा संगठन एवं मिट्टी के भौतिक गुण।
ख– मुख्य मृदाओं का संक्षिप्त परिचय।
ग– मुदा जैस पदार्थ, प्राप्ति के श्रोत, भूमि में वितरण एवं संरक्षण।
घ– मृदा अपरदन, प्रकार एवं हानियॉ।
ड.– भूमि संरक्षण के सामान्य उपाय।

3. इकाई 3 – सिंचाई एवं जल निकास – 15 अंक

क– सिंचाई, परीभाषा, आवश्यकता एवं महत्व, सिंचाई के श्रोत।
ख– फसलों की जलमांग, प्रभावित करने वाले कारक म्लानि बिन्दु
ग– मृदा नमी संरक्षण की आवश्यकता एवं उपाय।
घ– जल निकास, आवश्यकता एवं विधियॉ।
ड.– पौधों के लिए जल का महत्व।
च– उत्तराखण्ड के लिए उपयुक्त सिंचाई के साधन एवं विधियॉ।

4. इकाई 4 – खाद एवं उर्वरक – 12 अंक

क– खाद, महत्व एवं वर्गीकरण।
ख– पौधों की वृद्धि के लिए आवश्यक पोषक तत्व एवं उनके प्रभाव।
ग– गोबर की खाद, कम्पोस्ट खाद, वर्मी कम्पोस्ट एवं हरी खाद।
घ– अजैविक खाद (उर्वरक), वर्गीकरण एवं प्रकार।
ड.– अजैविक खाद का भूमि एवं फसलों पर प्रभाव, प्रयोग विधियॉ, जैविक एवं अजैविक खादों में

अन्तर।

5. इकाई 5 – कर्षण **– 09 अंक**

क– भू–परिष्करण, उद्देश्य, उपयोगिता एवं प्रकार।

ख– जुताई विधियॉ, भूपरिष्करण की आधुनिक विचारधारा।

ग– उत्तराखण्ड में प्रयोग किये जाने वाले यन्त्र–बनावट एवं कार्य।

पाठ्यक्रम (प्रयोगात्मक)
कृषि विज्ञान

समय – 3 घण्टे **पूर्णांक – 40**

1. विभिन्न प्रकार की जैविक एवं अजैविक खादों की पहचान एवं प्रयोग विधि — 06 अंक

2. उर्वरक मिश्रण बनाने के लिए परिकलन की सामान्य जानकारी — 06 अंक

3. विभिन्न प्रकार के कृषि यन्त्रों की पहचान एवं सामान्य उपयोग — 06 अंक

4. मौसमी खरपतवार, उर्वरकों, फसल सुरक्षा सम्बन्धी रसायनों, मृदा सुधारकों की पहचान एवं प्रयोग — 06 अंक

5. छात्रों द्वारा वर्षभर के प्रायोगिक कार्यो का अभिलेख तैयार करना उसका मूल्यांकन — 08 अंक

6. मौखिक — 08 अंक

लिखित	मौखिक	रिकार्ड फाईल	योग
24	08	08	40

2009—2010

Class - IX

INFORMATION TECHNOLOGY

Unitwise weightage-theory and Practials

Unit	Topic	Marks	
		Theory	Practical
1	**IT Basic**	10	00
2	**IT Tools** Windows MS-Office *MS-Word *MS-Power Point *MS-Excel	30	30
3	**IT Application**	00	30
Total		**40**	**60**

THEORY Marks : 40

Unit 1: IT BASICS

Convergence of Technologies:

Computer System:

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

Concept of Memory:

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

Mouse, Joy Stick, Scanner, Microphone, OCR, MICR, Light pen, Bar code Reader, Digital Camera,

Printer, Speaker, Plotter.

Storage Devices :

Computer languages :

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

Types of software:

System, utility and Application software with examples

Communication Technology :

Need for networking, LAN, MAN, and WAN

Data Communication Device : Modem,

Intrdouction to Internet.

Content:

Data, Information and multimedia;

UNIT 2 : IT TOOLS

MS-Windows:

Basic concept of an Operating System and its functions.

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

MS-OFFICE

MS Word:

Introduction to a Word Processor, Creating and Saving a document, Editing and Formating a Document; Text Style (B, I.U.), Font Type Size, changing color, alignment of text; Formating paragraphs withline 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 Word Art, Clipart and Pictures, Page Setting, Bullets and Numbering, Borders and Shading, Format Painter, Find and Replace, Inserting Tables: Inserting, deleting-rows and columns, merging cells, splitting cells, using autoformat: Mail Merge

MS Power Point :

Introduction to Presentation Graphics, Understanding the concept of Slide Shows, Basic elements of a slide, Different types of Slide Layouts, Creating and saving a Presentation, Different views of a slide: Normal view, Slide Sorter view and Slide Show, Editing and Formating a slide: Adding Titles, Subtitles, Text Background, Watermark ; Headers and Footers, Numbering Slides; Inserting pictures from files, Animating pictures and Text with Sound Effects, Timing Text box, Pictures and Slides, Rehearse Timings, ungrouping and Grouping pictures from Clipart.

MS Excel:

Introudction to Spreadsheets, Concept of Worksheets and workbooks, Creating and Saving a worksheet, Working with a spreadsheet: entering numbers, text, date/time, series using Auto Fill, Editing and formatting a worksheet including changing colour, size, font, alignment of text, Inserting or Deleting cells, rows and columns, Formulae-Entering a formula in a cell, using operators (+, -, *.) (in formulae, Relative referencing, Absolute referencing and mixed referencing, Printing a worksheet. Use Simple Statistical functions: SUM(), AVERAGE(), MAX(), MIN(), IF(), (without compound statements); inserting tables in worksheet, Embedding Charts of various types: Line, Pie, Scatter, Bar and Area in a worksheet.

UNIT 3: IT APPLICATIONS

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

Domains :

Documentation:

* Informal letter

* Formal letter

* Report Writing

* Greeting card

* Poster making

Presentation :

* School Magazine

* Environment and Pollution

* Product Advertisement

* Any topic specific from text book (any subject)

Analysis Reporting :

*Cricket Record

*Weather Report

* School/Class Result

NOTE:

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

Teachers are requested to demonstrate some other popular software for word processing, presentation, and spreadsheet, which support Hindi and/or some other Indian language(s). [Lead Office is an example of Office suite (word processor with an interface to MS-Office, Lotus Smartsuite, Pagemaker, Corel Draw etc.) with complete support to Indian language]

PRACTICALS

Practical Paper	Examination Duration	Marks
One	4 Hours	60

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

Design of a Practical Question Paper

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

I.	Windows Operating System	06 Marks
II.	MS Word	08 Marks
III.	MS Excel	08 Marks
IV.	MS Powerpoint	08 Marks

I. WINDOWS operating system:*

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

- Create
- Rename

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

II. MS Word:*

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

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

III. MS Power Point:*

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

- Editing and formating slides
- Inserting pictures and sounds
- Animating pictures and text wth sound effects

IV. MS Excel:*

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

- Formating cells and data
- Functions & Formulae (Relative, absolute and Mixed reference)
- Charts

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

(B) IT Application Report File — 20 Marks

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

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

(C) VIVA VOCE — 10 Marks

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