

**B.C.M. SCHOOL**  
**SYLLABUS OF CLASS XII Class (Med., Non. Med)**

**EXAMINATION PATTERN ( SESSION 2017-2018)**

<b>Exam</b>	<b>Month</b>	<b>Marks</b>
Unit Test	May	50 marks
Mid Term	September	Maximum marks for each subject (in all tests) will be as per CBSE pattern.
FLT	December	
Pre-Board	January	

**NOTE : Weekly tests will be conducted in the months not mentioned above.**

**General Instructions :**

1. It is mandatory for a student to appear in each of the examination.
2. In case of illness, medical certificate must be submitted **within a week of the day of examination** failing which the student will be assigned zero marks in the respective exam.
3. Minimum 75% attendance throughout the session is mandatory for a student to be eligible to appear in the Final Examination.

**ENGLISH**

**SYLLABUS 2017-2018**

- List of Books :** 1. Flamingo      2. Vistas  
 3. Reference Book - BBC  
 4. Novel - 'The Invisible Man' by H.G. Wells

- Section A - 30 Marks  
 Section B - 30 Marks  
 Section C - 40 Marks

<b>Month</b>	<b>Syllabus to be covered in :</b>	
<b>March :</b>	(Writing) Short composition i.e. Advertisements, notices, designing or drafting posters, writing formal and informal invitations and replies. Literature - Flamingo - The Last lesson Vistas - - The Tiger King,	<b>PAPER PATTERN</b> Section - A - 30 Marks * Literary, Factual or discursive passages for testing reading comprehension (12+10 M) * Note - Making (8 M)
<b>April :</b>	Letter Writing / Debate Literature - Lost Spring, Deep Water My Mother at Sixty-six (Poem) Vistas - The Enemy, Novel - Ch. 1 - 10	Section - B - 30 Marks * Advertisements, notices, posters, formal and Informal invitations and replies (4 M) * Formal Letters (6 M) a) business or official letters (for making enquiries, registering complaints, asking for and giving information, placing orders and sending replies)
<b>May :</b>	Flamingo - The Rat trap, Novel - Ch. 11 -15 An elementary school class room in a slum (Poem) Keeping Quiet (Poem), Should Wizard Hit Mommy Article / Speech for publication in a newspaper or a school magazine. Note Making	b) Letters to the editor c) Application for a job * Report or factual description (10 marks) * Article / Debate / Speech (10 marks)
<b>June :</b>	Letters based on verbal input Vistas - Should Wizard Hit Mommy UNIT TEST	Section - C - 40 Marks * Extracts from poems 4 marks * Short answer questions 3X4 = 12 marks * Long answer questions $\underbrace{6 + 6}_{\text{Text books}} + \underbrace{6 + 6}_{\text{Novel}}$

## ENGLISH

**SYLLABUS 2017-2018**

Month	
<b>JULY :</b>	Flamingo - Aunt Jennifer's Tigers (Poem), A Thing of Beauty (Poem) - Going Places, Indigo Vistas - - On the face of it Novel - Chap. 15 - 20 Debate
<b>AUG. :</b>	Vistas - Evans Tries an O Level Memories of Childhood * Cutting of my long hair * We Too are Human Beings
<b>SEPT. :</b>	Revision + Half Yearly Exam.
<b>OCT. :</b>	Revision
<b>NOV. :</b>	Revision
<b>DEC. :</b>	FLT
<b>JAN. :</b>	Pre-Board

**BOOK :** Maths Text Book (NCERT)  
Reference Book - R. D. Sharma, NCERT Examples

Month	
<b>March</b>	Ch. 3 : Matrices Ch. 4 : Determinants
<b>April</b>	Ch. 4 : (continued) Ch. 1 : Relation and Functions Ch. 2 : Inverse Trigonometric Functions
<b>May</b>	Ch. 5 : Continuity and Differentiation Ch. 6 : Application of derivatives
<b>June</b>	UNIT TEST
<b>July</b>	Ch. 7 : Integration Ch. 8 : Application of Integration
<b>Aug.</b>	Ch. 9 : Differential Equation Ch. 10 : Vectors

Month	
<b>Sep.</b>	HALF YEARLY EXAMS.
<b>Oct.</b>	Ch. 11 : Three Dimensional Geometry Ch. 12 : Linear Programming Ch. 13 : Probability
<b>Nov.</b>	Revision
<b>Dec.</b>	FLT
<b>Jan.</b>	Pre - Board

**Text Book : - NCERT Physics**

**Ref. Book - Fundamental Physics Pradeep's Publication**

**Practical Note Book : Fundamental (Vijaya Publication) Preet Note Book.**

Month	
<b>March :</b>	Electrostatics (3 Chapters approx.)
<b>April :</b>	Unit 1 : Electrostatics (Continuation) Unit 2 : Current Electricity
<b>May :</b>	Unit 3 : Magnetic effects of current and Magnetism
<b>June :</b>	Unit Test (50 Marks)
<b>July :</b>	Unit 3 : Continued.... Unit 4 : Electromagnetic Induction and Alternating Current
<b>Aug. :</b>	Unit 5 : EM Waves Unit 6 : Ray optics and wave optics Unit 7 : Dual Nature of matter and radiation
<b>Sept. :</b>	Unit 7 : Dual Nature of matter and radiation continued Half Yearly Examination
<b>Oct. :</b>	Unit 8 : Atoms and Nuclei Unit 9 : Semiconductor Devices
<b>Nov. :</b>	Unit 10 : Principles of Communication      Revision
<b>Dec. :</b>	Revision + FLT
<b>Jan. :</b>	Pre Board

Text Book : - N.C.E.R.T. Text Book

Ref. Book - Pradeep Publication

Practical Note Book - Fundamental

Month	
<b>March :</b>	Unit X - Haloalkanes and haloarenes Unit XI - Chemical Kinetics
<b>April :</b>	Unit II - Solution Unit III - Electrochemistry
<b>May :</b>	Unit IV : Alcohols, Phenols and Ethers Unit I : Solid State
<b>June :</b>	UNIT TEST - 1 (50 Marks)
<b>July :</b>	Unit V : Surface Chemistry Unit IX : Coordination Compound Unit XIV : Biomolecule
<b>Aug. :</b>	Unit VI : General principle and processes of Isolation of Elements Unit XIII : Organic Chemistry containing Nitrogen Unit XVI : Chemistry in Everyday Life
<b>Sept. :</b>	Half - Yearly Exam.

Month	
<b>Oct. :</b>	Unit VIII : d-Block Elements Unit VII : p -Block Elements
<b>Nov. :</b>	XV : Polymer XII : Aldehyde, Ketones and Carboxylic Acid
<b>Dec. :</b>	Revision + FLT
<b>Jan. :</b>	Pre Board Examination



Text Book - N.C.E.R.T Text Book

Ref. Book - Pardeep Biology (Pardeep Publications) Trueman's Elementary Biology

Practical Note Book - Fundamental Practical Note Book

Month		Month	
<b>March :</b>	L - 1 : Reproduction in Organisms L - 2 : Sexual Reproduction in Flowering Plants	<b>Oct.</b>	L - 13 Organisms and populations L - 14 Ecosystem
<b>April :</b>	L - 3 : Human Reproduction L - 4 Reproductive Health	<b>Nov.</b>	L - 15 Biodiversity and Conservation L - 16 Environmental Issues
<b>May :</b>	L - 5 Principles of inheritance and variation L - 6 Molecular Basis of Inheritance	<b>Dec. :</b>	Revision & FLT
<b>June :</b>	UNIT TEST (50 Marks)	<b>Jan. :</b>	Pre-board Examination (Whole Syllabus)
<b>July :</b>	L - 7 Evolution L - 8 Human Health and Disease L - 9 Strategies for Enhancement in Food production	<b>Feb. :</b>	Revision
<b>Aug. :</b>	L - 10 Microbes in Human welfare L - 11 Biotechnology : Principles and Processes L - 12 Biotechnology and its Applications		
<b>Sept. :</b>	Revision and Half Yearly Exam.		

Text Book - By Swan Publication

Practical Note Book :

Month

March :  
April -  
May  
(Ch. 1,  
2, 3)

**Unit I : Planning in Sports**

- \* Meaning and Objectives of Planning
- \* Various Committees and its responsibilities (pre; during & post)
- \* Tournament - Knock-Out, League or Round Robin and Combination
- \* Procedure to draw Fixtures - Knock - Out (Bye and Seeding) and League (Staircase and Cyclic)
- \* Intramural and Extramural - Meaning, Objectives and its significance.
- \* Specific Sports Programme (Sports Day, Health Run, Run for Fun, Fun for Specific Cause and Run for Unity)

**Unit II : Sports and Nutrition**

- \* Balanced Diet and Nutrition : Macro and Micro Nutrients.
- \* Nutritive and Non-Nutritive Components of Diet
- \* Eating for Weight Control - A Healthy weight, The Pitfalls of Dieting, Food intolerance and food myths.
- \* Sports Nutrition & its effect on performance (fluid & meal intake, pre, during & post competition)
- \* Food supplement for children

**Unit III : Yoga & Lifestyle**

- \* Asanas as preventive measures
- \* Obesity : Procedure, Benefits & contrindications for Vajrasana, Hastasana, Trikonasana, Ardh Matysendrasana
- \* Diabetes : Procedure, Benefits & contraindications for Bhujangasana, Paschimottasana, Pavan Muktasana, Ardh Matsyendrasana
- \* Asthema : Procedure, Benefits & contraindications for Sukhasana, Chakrasana, Gomukhasana, Parvatasana, Bhujangasana, Paschimottasana, Matsyasana
- Hypertension : Tadasana, Vajrasana, Pavan Muktasana, Ardha Chakrasana, Bhujangasana, Sharasana
- Back Pain : Tadasana, Ardh Matsyendrasana, Vakrasana, Shalabhasana, Bhujangasana

June

UNIT TEST

Month	
July (Ch. 4, 5, 6)	<p><b>Unit-IV : Physical Education &amp; Sports for Differently-Abled</b></p> <ul style="list-style-type: none"><li>* Concept of Disability &amp; Disorder</li><li>* Types of Disability, its causes &amp; nature (cognitive disability, intellectual disability, physical disability)</li><li>* Types of Disorder, its cause &amp; nature (ADHD, SPD, ASD, ODD, OCD)</li><li>* Disability Etiquettes</li><li>* Advantage of Physical Activities for children with special needs.</li><li>* Strategies to make Physical Activities assessable for children with special need.</li></ul> <p><b>Unit - V : Children and Sports</b></p> <ul style="list-style-type: none"><li>* Motor development &amp; factors affecting it.</li><li>* Exercise Guidelines at different stages of growth &amp; Development.</li><li>* Advantages &amp; disadvantages of weight training.</li><li>* Concept &amp; advantages of Correct Posture.</li><li>* Common Postural Deformities - Knock Knee; Flat Foot; Round Shoulders; Kyphosis; Bow Legs and Scolioses</li><li>Corrective Measures for Postural Deformities.</li></ul> <p><b>Unit - VI : Women and Sports</b></p> <ol style="list-style-type: none"><li>6.1 Sports Participation of Women in India</li><li>6.2 Special Considerations (Menarche, Menstrual Disfunction)</li><li>6.3 Female Athletics Triad (Oestroperosis, Amenoria, Eating Disorders)</li><li>6.4 Psychological Aspects of Women Athlete</li><li>6.5 Sociological Aspects of Sports participation</li></ol>

Month	
<p><b>August (Ch. 7, 8 )</b></p>	<p><b>7 : Test and Measurement in Sports</b></p> <ul style="list-style-type: none"> <li>* Computation of Fat Percentage. Slaughter - Lohman Children Skinfold Formula: Triceps &amp; Calf Skinfold (Male 6 to 17 yrs - % body fat = <math>(0.735 \times \text{sum of skinfold}) + 1.0</math> (Female 6 to 17 yrs - % body fat = <math>(0.610 \times \text{sum of skinfold}) + 5.0</math>)</li> <li>* Measurement of Muscular Strength - Kraus Weber Test</li> <li>* Motor Fitness Test - AAPHER</li> <li>* General Motor Fitness - Barrow three item general motor ability (Standing Broad Jump, Zig Zag Run, Medicine Ball Put - For Boys : 03 Kg &amp; For Girls : 01 Kg)</li> <li>* Measurement of Cardio Vascular Fitness - Harvard Step Test / Rockport Test</li> <li>* Computation of Fitness Index : Duration of the Exercise in Seconds X 100 <math>5.5 \times \text{Pulse count of 1-1.5 Min after Exercis}</math></li> <li>* Rikli and Jones - Senior Citizen Fitness Test             <ol style="list-style-type: none"> <li>1. Chair Stand test for lower body strength.</li> <li>2. Arm Curl test for upper body strength.</li> <li>3. Chair Sit and Reach test for lower body flexibility.</li> <li>4. Eight Foot Up and Go test for agility</li> <li>5. Back Scratch test for upper body flexibility.</li> <li>6. Six minute walk test for Aerobic Endurance.</li> </ol> </li> </ul>

Month	
	<p><b>UNIT VIII : Physiology and Sports</b></p> <ul style="list-style-type: none"> <li>* Gender Differences in Physical and Physiological Parameters</li> <li>* Physiological factor determining component of Physical Fitness.</li> <li>* Effect of exercise on Cardio Vascular System</li> <li>* Effect of exercise on Respiratory System</li> <li>* Effect of exercise on Muscular System.</li> <li>* Physiological changes due to ageing</li> <li>* Role of Physical activity maintaining functional fitness in aged population</li> </ul>
<p>Sept. (Ch. 9)</p>	<p><b>UNIT IX : Sports Medicine</b></p> <ul style="list-style-type: none"> <li>* Concept, Aims &amp; Scope of Sports Medicine</li> <li>* Sports injuries : Classification, Causes &amp; Prevention</li> <li>* First Aid - Aims and Objectives</li> <li>* Management of Injuries: Soft Tissue Injuries: (Abrasion, Contusion, Laceration, Incision, Sprain &amp; Strain) Bone and Joint Injuries: (Dislocation, Fractures, Stress Fracture, Green Stick, Communated, Transverse Oblique &amp; Impacted) &amp; HALF YEARLY EXAM.</li> </ul>
<p>Oct. (Ch. 10, 11, 12)</p>	<p><b>UNIT X : Kinesiology, Biomechanics &amp; Sports</b></p> <ul style="list-style-type: none"> <li>* Projectile &amp; Factors affecting Projectile Trajectory</li> <li>* Newton's Law of Motion &amp; its application in sports</li> <li>* Aerodynamics Principles</li> <li>* Friction &amp; Sports</li> </ul>

Month	
	<ul style="list-style-type: none"> <li>* Introduction to Axes &amp; Planes</li> <li>* Types of movements (Flexion, Extension, Abduction &amp; Adduction)</li> <li>* Major Muscles involved in running, jumping and throwing.</li> </ul> <p><b>UNIT XI : Psychology &amp; Sports</b></p> <ul style="list-style-type: none"> <li>* Understanding Stress &amp; Coping Strategies (Problem Focussed and Emotional Focussed)</li> <li>* Personality; its definition &amp; types - Trait &amp; Type (Sheldon &amp; Jung Classification) &amp; Big Five Theory</li> <li>* Motivation, its type &amp; techniques</li> <li>* Self-esteem &amp; Body Image</li> <li>* Psychological benefits of exercise</li> <li>* Meaning, Concept &amp; Types of Aggressions in Sports</li> </ul> <p><b>UNIT XII : Training in Sports</b></p> <ul style="list-style-type: none"> <li>* Strength - Definition, types &amp; methods of improving Strength - Isometric, Isotonic &amp; Isokinetic</li> <li>* Endurance - Definition, types &amp; methods to develop Endurance - Continuous Training, Interval Training &amp; Fartlek Training</li> <li>* Speed - Definition, types &amp; methods to develop Speed - Acceleration Run &amp; Pace Run</li> <li>* Flexibility - Definition, types &amp; methods to improve flexibility</li> <li>* Coordinative Abilities - Definition &amp; types</li> <li>* Circuit Training &amp; high Altitude Training; Introduction &amp; its impact.</li> </ul>
<b>Nov.</b>	Revision
<b>Dec.</b>	Full Length Test
<b>Jan.</b>	Pre- Board

**BOOK : Informatics Practices by Sumita Arora / Informatics Practices by NCERT**  
**Publication : Dhanpat Rai & Co.**

Month	
<b>March:</b>	Introduction Unit 1 : Networking and Open Standards Ch. 1 - Computer Networking & Ch. 2 - Open Source Concepts
<b>April :</b>	Unit 2 : Programming Ch. 3, 4, 5 - Review of Class XI. Programming Fundamentals. Ch. 10 Web application development Ch. 11, 12 - H.T.M.L Language / Project Interface, Back end Database
<b>May :</b>	Ch - 6, 7 More about Classes & Libraries, Concept of Inheritance, features of OOPs. Ch - 8 GUI Dialogs and Tables
<b>June :</b>	UNIT TEST
<b>July :</b>	Unit - 3 Relational Database Management System Ch. - 14 Review of RDBMS from Class XI Ch. - 15, 16, 17 - Database Fundamentals : TCL, DDL, DML Commands
<b>Aug. :</b>	Ch. - 9 Concept of Front - End and Database Connectivity JDBC Connectivity (Java & MySQL) Project development using connectivity for Final practical

Month	
Sept. :	HALF YEARLY EXAMS.
Oct. :	Ch. 13 - X.M.L Language UNIT 14 : IT APPLICATIONS Front - end Interface, Back-end Database
Nov. :	Revision
Dec. :	Revision + FLT
Jan. :	Revision + Pre-Board
Feb. :	Revision <b>Final Practical</b> : Evaluation of Practical Examination 1. Problem solving using Java                      4. Project (Group of 3-4 students) 2. SQL Queries    5. Viva Voce 3. Practical Record File
March :	Annual Examination



**Book Writer : Sumita Arora**  
**Book Name : Computer Science**  
**Book Publisher : Dhanpat Rai & Co.**

Month	
<b>March :</b>	C++ Revision Tour, Classes and Objects (Topic Classes only)
<b>April :</b>	Classes and Objects (Continued), Object Oriented Programming, Data File Handling, Constructor and Destructor, Functions overloading
<b>May :</b>	Database concepts, SQL
<b>June :</b>	UNIT TEST
<b>July :</b>	SQL (continued), Functions overloading
<b>Aug. :</b>	Boolean Algebra, Array
<b>Sept. :</b>	Inheritance                      HALF YEARLY EXAM.
<b>Oct. :</b>	Pointer, Linked lists, Stack and Queue
<b>Nov. :</b>	Communication and Networks, Project Work
<b>Dec. :</b>	Revision + FLT
<b>Jan. :</b>	Revision + Project + Pre-Board
<b>Feb. :</b>	Revision
<b>March :</b>	Final Exams.

Books - PANORAMIC INDIAN PAINTING PUBLISHED BY : TRINITY EDUCATIONAL AIDS

Month	Theory	Practicals
April :	<u>Theory</u> UNIT-I Miniature Painting (A) Rajput Miniatures or Rajasthani School of (Art) Painting. (B) The Pahari School of Painting	<u>Practicals</u> Still Life : Study of two or three natural and geometrical forms in pencil with light and shade from a fixed point of view.
May :	UNIT-II (A) The Mughal School of Art (B) The Deccani School of Art	Still Life in any medium (water/ pastel/ tempura /acrylic)
July- Aug. :	UNIT-III The Bengal School of Painting	Imaginative Painting Composition based on any subjects from life in any medium.
Sept. :	Half Yearly Exam.	Nature Study in water and poster colours with colour values
Oct. :	UNIT - IV The Modern Trends in Indian Art	
Nov. :	REVISION	
Dec.	FLT	
Jan.	<b>Pre Board Exams</b>	
Feb.	<b>Final Practical Examination</b>	

Month	
<b>March :</b>	<p>Theory : Definition of the following :- Varan, Grama                      Short Life sketch of “Ustad Abdul Karim Khan                      Pracitcal : One drut Khayal in Rag Bheemplasi with simple elaboration and few tanas.                      Talas :- Ek Tal, Chau tal, Teen Tal, KehravaTal, Dadra Tal</p>
<b>April :</b>	<p>Definition of Alap and Tana                      Short life sketch of “Ustad Faiyaz Khan”                      Practical : One drut khayal in Bhairav with few Tanas.                      Talas : Tal Rupak, Ghaptal.</p>
<b>May :</b>	<p>Definition of : Alankar, Murchana, Kan, Meend                      “Time theory” of Indian Music.                      “Classification of Ragas”.                      Practical : One drut Khayal in Rag Bageshwari with few Tanas.                      One composition of Sugam Sangeet.</p>

Month	Theory
<b>July &amp; Aug. :</b>	<p>Definition of Gamak, Khatka, Mukri, Short life sketch of "Pt. Krishan Rao Shankar" and Ustad Bade Ghulam Ali Khan".</p> <p>Practical : One drut Khayal in Rag Malkuns with few Tanas. One Tarana and one Dhamar in any one of the prescribed Ragas.</p> <p>Talas : Tilwada, Dhamar</p>
<b>Sept.</b>	Half Yearly Exam.
<b>Oct.</b>	<p>Detail study of the following treatises.</p> <p>(A) Sangeet Ratnakar (B) Sangeet Parijat</p> <p>Practical : One Vilambit Khayal with Alaps and Tanas in any one of the prescribed ragas.</p>
<b>Nov.</b>	Revision
<b>Dec.</b>	Revision + FLT
<b>Jan.</b>	Pre-Board Exams.
<b>Feb.</b>	Final Practical Exams.

**Text Book - Home Science (Text Book )**  
**Published by Saraswati Publications**

Month	Theory	Practical
<b>MARCH</b>	<ul style="list-style-type: none"> <li>* Human Development : Life Span Approach.</li> <li>* Know myself - Understanding Adolescents.</li> <li>* Cognitive Development among Adolescents.</li> <li>* Social and Emotional Development among adolescents and old age.</li> </ul>	<ul style="list-style-type: none"> <li>* Record a meal of a day and evaluate it.</li> <li>* Plan and prepare meals for family and carry out modifications.</li> </ul>
<b>APRIL</b>	Nutrition for self, family and Community <ul style="list-style-type: none"> <li>- Meaning and importance of meal planning.</li> <li>- Planning meals for the family and carrying out modifications.</li> <li>- Water for good health.</li> </ul>	<ul style="list-style-type: none"> <li>* Simple test for checking adulteration.</li> <li>* Preparation of ORS.</li> </ul>
<b>MAY</b>	<ul style="list-style-type: none"> <li>- Food Hygiene</li> <li>- Safety against food adulteration acc. to PFA.</li> <li>- Salient Features of Income Generating Schemes DWCRA - MG NREGA</li> </ul>	<ul style="list-style-type: none"> <li>* Fitting up the forms of banks and post office.</li> </ul>
<b>JUNE</b>	UNIT TEST	
<b>JULY</b>	Money Management and Consumer Education <ul style="list-style-type: none"> <li>* Family income &amp; Expenditure</li> <li>- Savings and Investments</li> <li>- Consumer Education</li> <li>- Consumer Aids</li> <li>- Consumer Protection and Education.</li> </ul>	<ul style="list-style-type: none"> <li>* Collection of different labels.</li> <li>* Preparing one label having quality mark.</li> </ul>

Month	Theory	Practical
<b>AUG.</b>	Career Options after Home Science Education. My Apparel * Clothing in relation to personality. * Factor influencing selection of clothing. * Selection and Purchase of Fabrics. * Readymade Garments - Quality and Workmanship. * Care of clothes.	-Making samples of basic stitches. - Illustrating principles of design. - Removal of stains. * Evaluation of Readymade garments. * Visit to two places and evaluating water portability.
<b>SEPT.</b>	HALF YEARLY EXAM.	- Report on the problems of adolescents. - Report on the problems and needs of old person.
<b>OCT.</b>	Revision	
<b>NOV.</b>	Revision	
<b>DEC.</b>	FLT	
<b>JAN.</b>	Pre-Board	