

Syllabus

Grade: VIII

Session: 2025-2026



St. Joseph International School

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Ten Basic Tips to Help Stop Climate Change

Climate is defined as an area's long-term weather patterns. The simplest way to describe climate is to look at average temperature and precipitation over time. Other useful elements for describing climate include the type and the timing of precipitation, amount of sunshine, average wind speeds and directions, number of days above freezing, weather extremes, and local geography. You must consider all the factors that work together to determine climate.

Don't have a lot of time, but want to take action? Here are ten, simple, everyday things each of us can do to help stop climate change.

Change a light: Replacing a regular light bulb with a compact fluorescent one saves 150 pounds of carbon dioxide each year.

Drive less: Walk, bike, carpool, take mass transit, and/or trip chain. All of these things can help reduce gas consumption and one pound of carbon dioxide for each mile you do not drive.

Recycle more and buy recycled: Save up to 2,400 pounds of carbon dioxide each year just by recycling half of your household waste.

Check your tires: Properly inflated tires mean good gas mileage. For each gallon of gas saved, 20 pounds of carbon dioxide are also never produced.

Use less hot water: It takes a lot of energy to heat water. Reducing the amount used means big savings in not only your energy bills, but also in carbon dioxide emissions.

Avoid products with a lot of packaging: Preventing waste from being created in the first place means that there is less energy waste and fewer resources consumed.

Adjust your thermostat: Keeping your thermostat at 68 degrees in winter and 78 degrees in summer not only helps with your energy bills, but it can reduce carbon dioxide emissions as well.

Plant a tree: A single tree can absorb one ton of carbon dioxide over its lifetime.

Turn off electronic devices when not in use: Simply turning off your TV, VCR, computer and other electronic devices can save each household thousands of pounds of carbon dioxide each year.

Stay informed: Use the Earth 911 Web site to help stay informed about environmental issues, and share your knowledge with others. Together, we can and do make Every Day Earth Day!

Ref:<http://earth911.com/blog/2001/04/02>

Introduction to the Grade: III–X Syllabus

Academic Year 2025–2026

It is our great pleasure to present the syllabus for Grades III through X for the 2025–2026 academic year. A well-crafted syllabus is more than a list of chapters—it is a roadmap that helps every learner become an independent, inquisitive, and disciplined scholar. With steady effort and thoughtful study, each student can translate this roadmap into genuine academic success.

To create a clear and purposeful guide, the unit heads of all classes collaborated closely with their subject teachers. Together they designed the syllabi for the eight subjects taught across the grades, outlining the topics, readings, and assessments that span the entire session. You will find detailed coverage of Class Tests (CTs), hall examinations, question patterns, and marks distributions for both the first and final semesters. All components have been aligned with the Cambridge Curriculum to ensure a rigorous yet supportive learning experience. We therefore encourage every learner at SJIS to consult this document regularly and prepare accordingly.

Our commitment echoes the words on our school monogram—*advancing in Wisdom and Virtue*. A sound education must nurture a child's physical, intellectual, moral, and spiritual growth. Inspired by this vision—and by the legacy of Blessed Basil Anthony Moreau, C.S.C., who founded the Congregation of Holy Cross almost two centuries ago—the Holy Cross Brothers continue to serve in classrooms around the world, guiding young minds toward integrity, compassion, and excellence.

Please note: Some subjects list only chapter names for their CT portions; students are advised to clarify any questions with their respective teachers. Finally, we extend heartfelt thanks to everyone whose dedication shaped this collective work. Your observations and suggestions for future improvement are always welcome.

With warm appreciation,



Brother Victor Bikash D' Rozario, CSC
Vice Principal

Accounting 7707

Book's name: 1. Business Accounting 1

Author: Alan Sangster and Lewis Gordon (15th edition)

Objective:

The objects are to enable students to develop:

- knowledge and understanding of the principles and purposes of accounting for individuals, businesses, non-trading organizations and society as a whole
- an understanding of accounting concepts, principles, policies, techniques, procedures and terminology
- improved skills of numeracy, literacy, communication, enquiry, presentation and interpretation
- improved accuracy, orderliness and the ability to think logically
- an excellent foundation for advanced study.

1st Semester 2025-2026

Name of the exam	Topic	Pattern	Marks
Half Yearly Exam	1. The fundamentals of accounting 1.1 The purpose of accounting	Paper 1 (MCQ)	20
	1.2 The accounting equation 2. Sources and recording of data 2.1 The double entry system of book-keeping 2.2 Business documents 2.3 Books of prime entry 3. Verification of accounting records 3.1 The trial balance (except the error)	Paper 2 (Structured written paper)	80
CT 1	Introduction (Accounting equation and Identifying assets and liabilities) General journal	Structured written paper	15
CT 2	Trial balance Cash Book	Structured written paper	15

Mark distribution

40% C.T. , S.B.A. and Assignment

60% Hall Test

1st Semester Hall Test duration 2 hours.

Paper 1 MCQ: 20 Marks (30 Minutes)

Paper 2 Structured written paper 80 Marks (1 Hour 30 Minutes)

Total marks: 100 (it will be converted into 60%)

2nd Semester 2025-2026

Name of the exam	Topic	Pattern	Mark s
Annual exam	3. Verification of accounting 3.3 Bank reconciliation statement 3.4 Control account	Paper 1 (MCQ)	20
	4. Accounting procedures 4.1 Capital and revenue expenditure and income 5. Preparation of financial statement 5.1 Sole Trader	Paper 2 (Structured written paper)	80

CT 1	The purpose of accounting The double entry system of book-keeping Business documents Books of prime entry The trial balance (except the error) Bank reconciliation statement	MCQ	15
CT 2	Control account Final account (Sole trader)	Structured written paper	15

1st Semester syllabus is included in the 2nd Semester

Mark distribution

40% C.T. , S.B.A. and Assignment

60% Hall Test

2nd Semester Hall Test duration 2 hours 30 minutes.

Paper 1 MCQ 45 minutes (20 marks)

Paper 2 Structured question 1 hour 45 minutes (80 marks)

Total marks: 100 (it will be converted into 60%)

Additional Mathematics 4037

Objectives:

Cambridge O Level Additional Mathematics enriches learners' understanding of connections within mathematics, refining their reasoning and analytical skills. This course reinforces learners' competency, confidence, and fluency in their use of techniques with and without a calculator, strengthening mathematical understanding and communication skills. It requires a fluent and confident ability to solve problems in abstract mathematics.

Cambridge O Level Additional Mathematics encourages learners to further develop their mathematical ability in problem solving, to provide strong progression for advanced study of mathematics or highly numerate subjects. It is designed to stretch the more able candidates and provides a smooth transition to Cambridge International AS & A Level Mathematics.

Our approach in Cambridge O Level Additional Mathematics encourages learners to be:

confident, in using mathematical language and more complex concepts to ask questions, explore ideas and communicate
responsible, by taking ownership of their learning to prepare for independent mathematical learning, and applying their mathematical knowledge and skills so that they can reason, problem solve and work collaboratively

reflective, by making connections within mathematics and across other subjects, and in evaluating methods and presenting logical arguments to justify solutions

innovative, by applying their knowledge and understanding to solve unfamiliar problems creatively, flexibly and efficiently, selecting from a range of mathematical techniques

engaged, by the beauty, patterns and structure of mathematics, they are curious to learn about the relevance of its many applications in society and the economy.

Books:

1. **Cambridge IGCSE and O Level Additional Mathematics Coursebook (Second Edition)**

2. **New Syllabus Additional Mathematics (7th Edition),**

Author: Prof Lee Peng Yee, Dr Fan Liang Huo – Shinglee Publications

The syllabus is made based on Cambridge IGCSE and O Level Additional Mathematics Coursebook (Second Edition).

Syllabus for Half-yearly examination:

Name of the examination	Topics	Pattern	Marks and Time
Half-yearly exam	Chapter 3: Indices and surds	Structured and unstructured questions	Paper 1 (Non-calculator) 40 Marks Time: 1 hour Paper 2 (Calculator) 40 Marks Time: 1 hour
	Chapter 4: Factors and polynomials		
	Chapter 7: Straight-line graphs		
	Chapter 2: Simultaneous equations and quadratics		
CT-1	Chapter 2: Simultaneous equations and quadratics Chapter 4: Factors and polynomials	Structured and unstructured questions	15 Marks Time: 25 minutes
CT-2	Chapter 3: Indices and surds Chapter 4: Factors and polynomials	Structured and unstructured questions	15 Marks Time: 25 minutes
	SBA		10
	Assignment		10

Half-yearly Exam pattern	
Paper 1: Non-calculator	Paper 2: Calculator
1 hour 40 marks Structured and unstructured questions Use of a calculator is not allowed	1 hour 40 marks Structured and unstructured questions A scientific calculator is required

CT, SBA & Assignment marks will be converted into 40%

Hall test marks will be converted into 60%

Syllabus for final examination:

Name of the exam	Topics	Pattern	Marks and Time
Year final exam	Chapter 1: Functions	Structured and unstructured questions	Paper 1 (Non-calculator) 60 Marks Time: 1 hour 30 minutes Paper 2 (Calculator) 60 Marks Time: 1 hour 30 minutes
	Chapter 2: Simultaneous equations and quadratics		
	Chapter 6: Logarithmic and exponential functions		
	Chapter 9: Trigonometry		
	Revision: Chapter 3: Indices and surds Chapter 4: Factors and polynomials Chapter 7: Straight-line graphs		
CT-1	Chapter 1: Functions Chapter 6: Logarithmic and exponential functions	Structured and unstructured questions	15 Marks Time: 25 minutes
CT-2	Chapter 6: Logarithmic and exponential functions Chapter 2: Simultaneous equations and quadratics	Structured and unstructured questions	15 Marks Time: 25 minutes
	SBA		10
	Assignment		10

Final Exam pattern	
Paper 1: Non-calculator	Paper 2: Calculator
1 hour 30 minutes 60 marks Structured and unstructured questions Use of a calculator is not allowed	1 hour 30 minutes 60 marks Structured and unstructured questions A scientific calculator is required

CT, SBA & Assignment marks will be converted into 40%

Hall test marks will be converted into 60%

Bangladesh Studies (7094)

Objectives:

- To understand the life and influence of major cultural figures in Bangladesh.
- To acquire a sound knowledge of the history and culture of Bangladesh.
- To know about the location and characteristics of the main landforms and rivers of Bangladesh.
- To learn about the formation of the main features of the major rivers.
- To comprehend the importance of forests and biomass to Bangladesh and its sustainable development.

Book: Bangladesh Studies (Paper-1 & 2)

Half Yearly Syllabus: 2025

Name of the exam	Chapters	Question Pattern	Marks
Half Yearly Exam	Paper 1: Topic 1: (a) Influence of Major Cultural Figures. (Page no: 1-24) <ul style="list-style-type: none"> • Alaol • Lalon Shah • Mir Mosharraf Hossain • Rabindranath Tagore • Begum Rokeya • Kazi Nazrul Islam • Jasimuddin • Zainul Abedin Paper 2: (Page 1-24) Topic 1: Physical Features (a) Natural Topography (b) Drainage System	Cambridge O Level Pattern Paper-1 History and Culture of Bangladesh Paper-2 Environment and Development of Bangladesh	Marks will be converted into 60
CT-1	Topic 1 (a): Influence of Major Cultural Figures. <ul style="list-style-type: none"> • Alaol • Lalon Shah • Mir Mosharraf Hossain • Rabindranath Tagore 	MCQ, S/Q, B/Q, Define the terms, Creative questions (Graph/Map/Figure/Paragraph analysis) Marks-15	Marks will be converted into 40
CT-2	Topic 1: Physical Features (a) Natural Topography	MCQ, S/Q, B/Q, Define the terms, Creative questions (Graph/Map/Figure/Paragraph analysis) Marks-15	
	SBA	10	
	Assignment/Scrapbook/Poster Making/Presentation	10	
	Total		100

Annual Term Syllabus

Name of the exam	Chapters	Question Pattern	Marks
Annual Exam	Half yearly syllabus will be included. Paper 1 (Page 25-39) Topic 1 (b): The emergence and development of Bengali language, Literature, art and architecture Half yearly syllabus will be included. Paper 2: (Page 41-56) Topic 3: (a) Forests and Biomass (b) Fish	Cambridge O Level Pattern Paper-1 History and Culture of Bangladesh Paper-2 Environment and Development of Bangladesh	Marks will be converted into 60

CT-1	Topic 1 (b): General background <ul style="list-style-type: none"> • Language • Literature • The arts 	MCQ, S/Q, B/Q, Define the terms, Creative questions (Graph/Map/Figure/Paragraph analysis) Marks-15	Marks will be converted into 40
CT-2	Topic 3 (a): Forest and Biomass	MCQ, S/Q, B/Q, Define the terms, Creative questions (Graph/Map/Figure/Paragraph analysis) Marks-15	
	SBA	10	
	Assignment/Scrapbook/Poster Making/Presentation	10	
	Total		100

Biology

Objectives:

The syllabus aims to enable grade 8 students to:

- Acquire scientific knowledge and understanding of scientific theories and practice.
- Enjoy science and develop an informed interest in scientific matters which support further study.

Books: Cambridge GCE O level biology Book D.G. Mackean, Dave Hayward,
Half Yearly Syllabus

Name of the exam	Chapters	Pattern	Marks
Half Yearly Exam	Unit 1: Cells Unit 2: Classification Unit 3: Movement into and out of cells Unit 4: Biological molecules Unit 5: Enzymes Unit 8: Human nutrition * All the chapters from Half Yearly Examination are included for both Practical & Theoretical assessment.	1. Paper 1: Multiple Choice 60 minutes 40 marks 40 four-option multiple-choice questions 2. Paper 2: Theory 1 hour 15 minutes 50 marks Short-answer and structured questions	90 *The total marks from the hall test will be converted into 60%. *Another 40% mark will be provided by assessing the SBA, Practical Class, and Class Test
CT-1	Unit 1: Cells Unit 2: Classification Unit 3: Movement into and out of cells	1. Creative/Structured Questions, 2. Short-Answer Questions, 3. Fill in the blanks 4. Multiple Choice Questions, 5. Labeling/Drawing	15
CT-2	Unit 4: Biological molecules Unit 5: Enzymes Unit 8: Human nutrition	1. Creative/Structured Questions, 2. Short-Answer Questions, 3. Fill in the blanks 4. Multiple Choice Questions, 5. Labeling/Drawing	15
	SBA		10
	Practical Class Attendance & Practical C.W.	1. Experiment 2. Labeling/Drawing 3. Observation	10
	Total		100

Annual Term Syllabus

Name of the Exam	Chapters	Pattern	Marks
Annual Exam	Unit 6: Plant nutrition Unit 7: Transport in Flowering Plants Unit 9: Human Gas Exchange Unit 10: Respiration Unit 11 Transport in Humans Topics from the 1st semester will also be included in the 2nd semester. * All the chapters from Half Yearly Examination is included for Practical assessment only.	1. Paper 1: Multiple Choice 60 minutes 40 marks 40 four-option multiple-choice questions 2. Paper 2: Theory 1 hour 15 minutes 50 marks Short-answer and structured questions 3. Paper 3: Practical 1 hour 30 marks Questions will be based on the basic experimental skills in Section 4	120 *The total marks from the hall test will be converted into 60% *Other 40% mark will be provided by assessing the SBA, Practical Class and Class Test
CT-1	Unit 6: Plant Nutrition Unit 7: Transport in Flowering Plants	1. Creative/Structured Questions, 2. Short-Answer Questions, 3. Fill in the blanks 4. Multiple Choice Questions, 5. Labeling/Drawing	15
CT-2	Unit 9: Human Gas Exchange Unit 10: Respiration Unit 11: Transport in human	1. Creative/Structured Questions, 2. Short-Answer Questions, 3. Key words 4. True or False Questions, 5. Labeling/Drawing	15
	SBA		10
	Total		100

Business (7081)

Learners will be able to:

- Understand the concepts, purpose, nature and classification of business activity, enterprise and entrepreneurs, why some businesses grow while others remain small, how business size can be measured, types of business organisation, business objectives and stakeholder objectives.
- Recognize the functional area of human resources, importance, methods of motivating a workforce, how businesses are organised, managed, and methods of recruitment, selection and training of employees.
- Interpret the importance and methods of effective internal and external communication, role of marketing, the distinctions between niche and mass markets, the techniques of market segmentation, the methods and importance of market research.

Books: Cambridge IGCSE and O'Level Business Studies by K. Borrington & Peter Stimpson-5th Edition

Reference Book: Cambridge IGCSE® Business Studies Coursebook by Mark Fisher, Medi Houghton, Veenu Jain
Half Yearly Syllabus 2025

Name of the exam	Topics	Pattern	Marks
Half Yearly Exam	1. Business activity 2. Classification of businesses 3. Enterprise, business growth and size 4. Types of business organisation 5. Business objectives and stakeholder objectives 6. Motivating employees	Cambridge O'Level Pattern Paper-1: Short Answer and Data Response Paper-2: Case Study	Marks will be converted into 60
CT-1	1. Business activity 2. Classification of businesses	Paper-1: Short Answer and Data Response Marks- 15	Marks will be converted into 40
CT-2	3. Enterprise, business growth and size 4. Types of business organisation	Paper-1: Short Answer and Data Response Marks- 15	
	SBA	10	
	Assignment/Lab Copy/ Presentation/ Scrap Book	10	
	Total		100

Annual Term Syllabus- 2026

Name of the exam	Chapters	Pattern	Marks
Annual Exam	Half Yearly Syllabus will be included. 7. Organisation and management 8. Recruitment, selection and training of employees 9. Internal and external communication 10. Marketing, competition and the customer 11. Market research 12. The marketing mix: product	Cambridge O'Level Pattern Paper-1: Short Answer and Data Response Paper-2: Case Study	Marks will be converted into 60
CT-1	7. Organisation and management 8. Recruitment, selection and training of employees	Paper-1: Short Answer and Data Response Marks- 15	Marks will be converted into 40
CT-2	9. Internal and external communication 10. Marketing, competition and the customer	Paper-1: Short Answer and Data Response Marks- 15	
	SBA	10	
	Assignment/Lab Copy/ Presentation/ Scrap Book	10	
	Total		100

Chemistry

Objective:

Approaching this syllabus for grade 8 Chemistry the learners will be beneficiary in many ways.

- It will help students for the next step of their education, to become confident, responsible, reflective, innovative and engaged.
- Learners will get a thorough knowledge and understanding of the subject matters and get help to develop their skills and the knowledge acquired to solve problems in everyday life, including the sustainability issues and the challenges facing our environment.
- It will help learners to develop a life-long curiosity about the natural world and enables them to seek scientific explanations to the phenomena around them.

Book:

1. Chemistry Matters (3rd Edition)

Authors: Marc Chang, Dr Alistair Chew, John Sadler, Tan Yin Toon, Dr. Wong Heng-Vee, Woo Chang Hong.
(Marshall Cavendish Education Pte Ltd.)

Syllabus for Half Yearly

Name of the Exam	Chapters	Pattern	Marks
Half Yearly Examination	Chapter 1: Experimental Chemistry Chapter 2: Kinetic Particle Theory Chapter 3: Atomic Structure Chapter 4: Chemical Bonding Chapter 5: Structure and Properties of Materials Chapter 6: Chemical Formulae and Equations	<ul style="list-style-type: none"> ▪ Multiple choice questions ▪ Structured questions (Including questions from Lab sessions) 	60%
CT-1	Chapter 1: Experimental Chemistry Chapter 2: Kinetic Particle Theory	<ul style="list-style-type: none"> ▪ Multiple choice questions ▪ Structured questions 	40%
CT-2	Chapter 3: Atomic Structure Chapter 4: Chemical Bonding	<ul style="list-style-type: none"> ▪ Multiple choice questions ▪ Structured questions 	
SBA			
Assignment			
Total			100

Syllabus for Final Semester

Name of the Exam	Chapters	Pattern	Marks
Final Semester Examination	Chapter 7: Mole Concept and Stoichiometry Chapter 8: Acids and Bases Chapter 9: Salts Chapter 11: Qualitative Analysis Chapter 12: Oxidation and Reduction Chapter 14: The Periodic Table Revision: Half Yearly syllabus. (30% of questions will be provided from the Half Yearly syllabus).	<ul style="list-style-type: none"> ▪ Multiple choice questions ▪ Structured questions (Including questions from Lab sessions) 	60%
CT-1	Chapter 7: Mole Concept and Stoichiometry	<ul style="list-style-type: none"> ▪ Multiple choice questions ▪ Structured questions 	40%
CT-2	Chapter 8: Acids and Bases Chapter 9: Salts	<ul style="list-style-type: none"> ▪ Multiple choice questions ▪ Structured questions 	
SBA			
Assignment			
Total			100

The above chapters will cover the below-listed topics from the **Cambridge O Level Chemistry 5070 syllabus**. If required, additional handouts will be provided.

1 : States of matter (Chapter 2)

- 1.1 : Solids, liquids and gases
- 1.2 : Diffusion

2 : Atoms, Elements and Compounds (Chapter 3, 4, 5)

- 2.1 : Elements, compounds and mixtures
- 2.2 : Atomic structure and the Periodic Table
- 2.3 : Isotopes
- 2.4 : Ion and ionic bonds
- 2.5 : Simple molecules and covalent bonds
- 2.6 : Giant covalent structures
- 2.7 : Metallic bonding

3 : Stoichiometry (Chapter 6, 7)

- 3.1 : Formulae
- 3.2 : Relative masses of atoms and molecules
- 3.3 : The mole and the Avogadro constant

6 : Chemical reactions (Chapter 12)

- 6.1 : Physical and chemical changes
- 6.4 : Redox

7 : Acids, bases and salts (Chapter 8, 9)

- 7.1 : The characteristic properties of acids and bases
- 7.2 : Oxides
- 7.3 : Preparation of salts

8 : The Periodic Table (Chapter 14)

- 8.1 : Arrangement of elements
- 8.2 : Group I properties
- 8.3 : Group VII properties
- 8.4 : Transition elements
- 8.5 : Noble gases

12 : Experimental techniques and chemical analysis (Chapter 1, 11)

- 12.1 : Experimental design
- 12.2 : Acid–base titrations
- 12.3 : Chromatography
- 12.4 : Separation and purification
- 12.5 : Identification of ions and gases

Computer Science (2210)

Objective: -

Students who learn how to code and who understand the basics of computer science develop few potentials such as

- a higher level of integral thinking, algorithmic thinking, creativity, and even teamwork skills. This whole skill-set is valuable and helpful in any field, whether or not it is related to computers and technology.
- be able to apply problem solving skills to formalize general problem statements into precise algorithmic solutions.
- demonstrate an understanding of the interplay between theory and practice

Books: 1. Cambridge IGCSE™ and O Level

Computer Science (Second Edition)

By – David Watson & Helen Williams

2. Computer Science IGCSE and O'Level Course Book by Sarah Lawrey & Victoria Ellis

1st Semester

Name of the exam	Chapters	Pattern	Marks
Half Yearly Exam	<u>Paper : 1</u> Chapter-1: Data Representation=> 1.1: Number System 1.2: Text, Sound and Images 1.3: Data Storage and File compression Chapter-2: Data Transmission=> 2.1: Types and Methods of Data Transmission 2.2: Methods of Error detection 2.3: Symmetric and Asymmetric encryption <u>Paper : 2</u> Chapter:10 => Boolean Logic 10.1: Standard Logic Gates Symbol 10.2: The function of the Six Logic gates 10.3: Logic Circuits, Logic Expression, Truth Tables and Problem Statements	T/F, F/B, MCQ, One sentence Q/A, S/Q, B/Q, Creative questions	50
CT-1	Chapter-1: Data Representation=> 1.1: Number System 1.2: Text, Sound and Images	T/F, F/B, MCQ, One sentence Q/A, S/Q, Creative questions	15
CT-2	<u>Paper : 2</u> Chapter:10 => Boolean Logic 10.1: Standard Logic Gates Symbol 10.2: The function of the Six Logic gates 10.3: Logic Circuits, Logic Expression, Truth Tables and Problem Statements(Selected Topics)	T/F, F/B, MCQ, One sentence Q/A, S/Q, Creative questions	15
	SBA		10
	Practical		10
	Total		100

Final Semester

Name of the exam	Chapters	Pattern	Marks
Annual Exam	<u>Paper 1:</u> Chapter-3: Hardware=> 3.1: Computer Architecture 3.2: Input and Output Device 3.3: Data Storage 3.4: Network Hardware <u>Paper 2:</u> Chapter-7: Algorithm design and Problem Solving=> 7.1: The Program Development Life Cycle. 7.2: Computer System, Sub-system and decomposition. 7.3: Explaining the purpose of the Algorithm. 7.4: Standard methods of Solution. 7.5: Validation and Verification 7.6: Test data 7.7: Trace table to document dry runs of algorithm. 7.8: Identifying errors in Algorithm. 7.9: Writing and amending Algorithm. Chapter-8: Programming=> 8.1: Programming Concepts 8.2: Arrays 8.3: File Handling <u>Revision on the topics from 1st Semester</u>	T/F, F/B, MCQ, One sentence Q/A, S/Q, B/Q, Creative questions	50
CT-1	Chapter-3: Hardware=> (Selected Topics)	T/F, F/B, MCQ, One sentence Q/A, S/Q, Creative questions	15
CT-2	Chapter-7: Algorithm design and Problem Solving=>(Selected Topics) Chapter-8: Programming=> (Selected Topics)	T/F, F/B, MCQ, One sentence Q/A, S/Q, Creative questions	15
	SBA		10
	Practical		10
	Total		100

***Syllabus and question pattern can be changed or altered due to the time frame.

Economics (2281)

Objectives: Students will gain lifelong skills, including: •an understanding of economic theory, terminology and principles •the ability to apply the tools of economic analysis •the ability to distinguish between facts and value judgements in economic issues •an understanding of, and an ability to use, basic economic numeracy and literacy •the ability to take a greater part in decision-making processes in everyday life •an ability to use examples from a variety of economies •an excellent foundation for advanced study in economic

Books: Cambridge IGCSE® and O Level Economics Course book Second edition, - *Author:* Susan Grant

Half Yearly Syllabus

Name of the Exam	Topics	Pattern	Marks
Half Yearly Exam	<ul style="list-style-type: none"> The nature of the economic problem The factors of production Opportunity cost Production possibility curve (PPC) diagrams The role of markets in allocating resources Demand 	<ul style="list-style-type: none"> Short questions Descriptive analysis Problem solving MCQ Case Study 	60%
CT 1			
CT-2	<ul style="list-style-type: none"> Supply Price determination Price changes 	<ul style="list-style-type: none"> Short questions Problem solving 	40%
		<ul style="list-style-type: none"> Short questions Problem solving 	
	SBA		
	Assignment/Class Copy/Presentation		
	Total		
			100

Annual Term Syllabus

Name of the Exam	Chapters	Pattern	Marks
Annual Exam	<ul style="list-style-type: none"> Price elasticity of demand (PED) Price elasticity of supply (PES) Market economic system Market failure 	<ul style="list-style-type: none"> Short questions Descriptive analysis Problem solving MCQ Case Study 	60%
CT 1			
CT-2	<ul style="list-style-type: none"> Mixed economic system Money and banking Households 	<ul style="list-style-type: none"> Short questions Problem solving 	40%
	<ul style="list-style-type: none"> Workers 	1. Short questions 2. Problem solving	
	SBA		
	Assignment/Class Copy/Presentation		
	Total		
			100

English Language (1123)

Books' Names:

Cambridge Checkpoint English Course book 9 by Marian Cox

Cambridge Checkpoint English Workbook 9 by Marian Cox

*****Please note that syllabus is subject to change for any addition or changes of topics as per students' needs (will be mentioned in class)**

Objectives:

- Introducing O level syllabus to the learners.
- R1 demonstrate understanding of explicit meanings
- R2 demonstrate understanding of implicit meanings and attitudes
- R3 analyse, evaluate and develop facts, ideas and opinions, using appropriate support from the text
- R4 demonstrate understanding of how writers achieve effects and influence readers
- R5 select and use information for specific purposes.
- W1 articulate experience and express what is thought, felt and imagined
- W2 organise and structure ideas and opinions for deliberate effect
- W3 use a range of vocabulary and sentence structures appropriate to context
- W4 use register appropriate to context
- W5 make accurate use of spelling, punctuation and grammar.

Half Yearly Syllabus

Name of the Exam	Chapters	Pattern	Marks Percentage
Half Yearly Exam	<ul style="list-style-type: none"> ● Comprehension, summary, interview, descriptive and narrative composition ● Grammar: simple, complex and compound sentences; conditionals, common errors ● Additional reading: a compiled book will be provided 	Paper 1 and Paper 2 question patterns.	60%
CT-1	<ul style="list-style-type: none"> ● Comprehension - understanding of explicit meanings, understanding of implicit meanings and attitude, and understanding of how writers achieve effects and influence readers. ● Summary, interview - understanding of explicit meanings, select and use information for specific purposes, organise and structure ideas and opinions for deliberate effect, use a range of vocabulary and sentence structures appropriate to context, demonstrate understanding of implicit meanings and attitudes. ● Task to improve the quality of English language – formal and informal English, sentence constructions 	Focused on Paper 1 question patterns.	40%
CT-2	<ul style="list-style-type: none"> ● Descriptive and narrative composition ● Task to improve the quality of English language –figurative language, crafted writing, contextualized vocabulary, basic grammar, punctuation. 	Focused on Paper 2 question patterns.	
SBA			
Assignment/ Presentation			
Total		100	

Annual Term Syllabus

Name of the Exam	Chapters	Pattern	Marks percentage
Annual Examination	<ul style="list-style-type: none"> Article writing, report writing, formal and informal letter Grammar: phrasal verbs, capitalizations, verb agreement Additional reading: a compiled book will be provided Task to improve the quality of English language – formal and informal English, sentence constructions, figurative language, crafted writing, contextualized vocabulary, basic grammar, punctuation. 	Paper 1 and Paper 2 question patterns.	60%
CT-1	<ul style="list-style-type: none"> Article writing, formal and informal letter Task to improve the quality of English language – formal and informal English, sentence constructions. 	Focused on Paper 2 question patterns.	40%
CT-2	<ul style="list-style-type: none"> Report writing Task to improve the quality of English language – figurative language, crafted writing, contextualized vocabulary, basic grammar, punctuation. 	Focused on Paper 2 question patterns.	
SBA			
Assignment/ Presentation			
Total			100

Subject: Mathematics (Syllabus D) 4024

Objectives:

This syllabus is specially designed to provide valuable learning experiences to engage the hearts and minds of students sitting for the Cambridge O Level examination in Mathematics. Cambridge O Level Mathematics allows learners to gain lifelong benefits, including:

- Increase intellectual curiosity, develop mathematical language as a means of communication and investigation and explore mathematical ways of reasoning.
- Acquire and apply skills and knowledge relating to numbers, measure, and space in mathematical situations that they will meet in life.
- Acquire a foundation appropriate to their further study of mathematics and of other disciplines.
- Appreciate the pattern, structure and power of mathematics and derive satisfaction, enjoyment, and confidence from the understanding of concepts and the mastery of skills.

Books:

1. Cambridge O Level Mathematics Coursebook (Second Edition)

Author: Audrey Simpson

2. Cambridge O Level Mathematics (Second Edition) Hodder Education

Author: Micheal Handbury, Jean Matthews

[The syllabus is made based on the Book 2: Cambridge O Level Mathematics (Second Edition) Hodder Education Author: Micheal Handbury, Jean Matthews]

Syllabus of first semester			
Name of the exam	Chapter / Topic	Question Pattern	Marks and Time
Half Yearly Exam	From Book 2 18. Surds 2. Sets 10. Limits of accuracy 13. Percentages 17. Exponential growth and decay 31. Coordinate geometry 30. Functions Worksheet 1 based on 1. Number 8. Standard form 9. Estimation 11. Ratio and proportion 12. Rates 15. Time 16. Money Worksheet 2 based on 20. Algebraic manipulation 21. Algebraic fractions 22. Indices 2	Structured and unstructured questions	Paper 1 Marks: 50 Time: 1 hr Paper 2 Marks: 50 Time: 1 hr
CT-1	From Book 2 18. Surds 2. Sets	Structured and unstructured questions	Marks: 15 Time: 25 mins Non-calculator
CT-2	From Book 2 10. Limits of accuracy 13. Percentages 17. Exponential growth and decay	Structured and unstructured questions	Marks: 15 Time: 25 mins Calculator
	SBA		10
	Assignment		10

Half-yearly Exam Pattern	
Paper 1: Non-calculator	Paper 2: Calculator
1 hour 50 marks Structured and unstructured questions. Use of a calculator is not allowed	1 hour 50 marks Structured and unstructured questions. A scientific calculator is required.

CT, SBA & Assignment marks will be converted into 40%

Hall test marks will be converted into 60%

Syllabus of final semester			
Exam	Chapter / Topic	Question Pattern	Marks
Annual Exam	From Book 2 24. Inequalities 25. Sequences 35. Similarity 41. Pythagoras' theorem and trigonometry 40. Mensuration Worksheet 1 based on 23. Equations 26. Proportion 27. Units of measure Revision of All Chapters from Half yearly	Structured and unstructured questions	Paper 1 Marks: 60 Time: 1 hour 30 minutes Paper 2 Marks: 60 Time: 1 hour 30 minutes
CT-1	Worksheet 1 based on 23. Equations 26. Proportion 27. Units of measure From Book 2 24. Inequalities	Structured and unstructured questions	Marks: 15 Time: 25 mins Calculator
CT-2	From Book 2 25. Sequences 35. Similarity 41. Pythagoras' theorem and trigonometry	Structured and unstructured questions	Marks: 15 Time: 25 mins Calculator
	SBA		10
	Assignment		10

Final Exam Pattern	
Paper 1: Non-calculator	Paper 2: Calculator
1 hour 30 minutes 60 marks Structured and unstructured questions. Use of a calculator is not allowed.	1 hour 30 minutes 60 marks Structured and unstructured questions. A scientific calculator is required.

CT, SBA & Assignment marks will be converted into 40%

Hall test marks will be converted into 60%

Physics

Why choose this syllabus?

Key benefits:

Cambridge O Level is typically for 14 to 16 year olds and is an internationally recognised qualification. It has been designed especially for an international market and is sensitive to the needs of different countries. Cambridge O Level is designed for learners whose first language may not be English, and this is acknowledged throughout the examination process.

Our programmes promote a thorough knowledge and understanding of a subject and help to develop the skills learners need for their next steps in education or employment.

Cambridge O Level Physics develops a set of transferable skills including handling data, practical problem-solving and applying the scientific method. Learners develop relevant attitudes, such as concern for accuracy and precision, objectivity, integrity, enquiry, initiative and inventiveness. They acquire the essential scientific skills required for progression to further studies or employment.

Our approach in Cambridge O Level Physics encourages learners to be:

confident, interested in learning about science, questioning ideas and using scientific language to communicate their views and opinions

responsible, working methodically and safely when working alone or collaboratively with others

reflective, learning from their experiences and interested in scientific issues that affect the individual, the community and the environment

innovative, solving unfamiliar problems confidently and creatively

engaged, keen to develop scientific skills, curious about scientific principles and their application in the world.

Aims

The aims describe the purposes of a course based on this syllabus.

You can deliver some of the aims using suitable local, international or historical examples and applications, or through collaborative experimental work.

The aims are to enable students to:

- acquire scientific knowledge and understanding of scientific theories and practice
- develop a range of experimental skills, including handling variables and working safely
- use scientific data and evidence to solve problems and discuss the limitations of scientific methods
- communicate effectively and clearly, using scientific terminology, notation and conventions
- understand that the application of scientific knowledge can benefit people and the environment
- enjoy science and develop an informed interest in scientific matters which support further study.

Books: Cambridge O Level Physics (Heather Kennett, Tom Duncan)

Half yearly Syllabus

Name of Examination	Chapters	Pattern	Marks
Half Yearly Exam	Motion, forces and energy 1.1 Physical quantities and measurement techniques Motion Mass and weight Density, Forces Energy, work and power, Pressure	Multiple choice questions & Structured questions	60%
CT-1	1.1 Physical quantities and measurement techniques Motion Mass and weight Density	Multiple choice questions & Structured questions	40%
CT-2	1.5 Forces Energy, work and power, Pressure	Multiple choice questions & Structured questions	
	SBA		
	Assignment/ Lab/ Class performances		
	Total		100%

Annual term Syllabus

Name of Examination	Chapters	Pattern	Marks
Annual Examination	<u>HALF YEARLY SYLLABUS INCLUDED</u> Thermal physics Kinetic particle model of matter 2.3 Transfer of thermal energy Waves 3.2 Light	Multiple choice questions & Structured questions	60%
CT-1	Kinetic particle model of matter 2.3 Transfer of thermal energy	Multiple choice questions & Structured questions	40%
CT-2	3.2 Light	Multiple choice questions & Structured questions	
	SBA		
	Assignment/ Lab/ Class performances		
	Total		100%

Bengali

Objectives:

- enable students to communicate accurately, appropriately and effectively in writing
- enable students to understand and respond appropriately to what they read
- encourage students to enjoy and appreciate the variety of language
- complement the students' other areas of study by developing skills of a more general application (e.g. analysis, synthesis, drawing of inferences)
- promote the students' personal development and an understanding of themselves and others..

1st Semester

Name of the exam	Chapters	Pattern	Marks
Half Yearly Exam	<p>Paper-1</p> <p>বিভাগ: ক- চিঠি:</p> <p>১। তুমি এবং তোমার কয়েকজন বন্ধু মিলে সুন্দরবন ভ্রমণে গিয়েছিলে। তোমার অন্য এক বিদেশী বন্ধুকে ভ্রমণের এ অভিজ্ঞতা বিনিময় করে একটি চিঠি লেখ।</p> <p>২। সম্প্রতি তুমি একটি সাংস্কৃতিক উৎসব দেখেছ। এ বিষয়ে তোমার প্রিয় বন্ধুকে একটি পত্র লেখ।</p> <p>৩। দরিদ্র শিশুদের পড়ালেখার জন্য তোমার বন্ধু কিছু করতে চায়। এ বিষয়ে পরামর্শ দিয়ে বিদেশী বন্ধুকে একটি চিঠি লেখ।</p> <p>প্রতিবেদন:</p> <p>১। তোমার এলাকায় জলাবদ্ধতার সমস্যা নিয়ে পত্রিকায় প্রকাশের জন্যে একটি প্রতিবেদন লেখ।</p> <p>২। বিদ্যুৎ ব্যবহারে সচেতনতা বৃদ্ধিতে করণীয় পদক্ষেপ সম্বন্ধে পত্রিকায় প্রকাশের জন্যে একটি প্রতিবেদন লেখ।</p> <p>৩। সম্প্রতি তোমার বিদ্যালয় প্রাঙ্গণে আন্তঃস্কুল ক্রীড়া প্রতিযোগিতার আয়োজন করা হয়েছে। সে বিষয়ে একটি প্রতিবেদন লেখ।</p> <p>বিভাগ: খ-</p> <p>রচনা:</p> <p>১। স্কুলের শিক্ষাক্রমে খেলাধুলার প্রয়োজনীয়তা</p> <p>২। তোমার প্রিয় একটি ঋতু।</p> <p>৩। ছাত্রজীবনে বন্ধুত্বের প্রয়োজনীয়তা।</p> <p>৪। বাংলার কুটিরশিল্প।</p> <p>৫। তোমার জীবনের লক্ষ্য</p> <p>Paper-2</p> <p>১। সন্ধি বিচ্ছেদ</p> <p>২। বাগধারা</p> <p>৩। বাক্য রূপান্তর</p> <p>৪। ক্লোজ পরিচ্ছেদ।</p> <p>৫। অনুচ্ছেদ পড়ে বোধ জ্ঞানের বহুবিকল্প প্রশ্ন।</p>	<p>১। দু'টি বিষয় থেকে যেকোনো একটি বেছে নিয়ে প্রায় ১২০ শব্দে উত্তর লেখ।</p> <p>২। তিনটি রচনার মধ্যে থেকে যেকোনো একটি বিষয়ে প্রায় ২০০ শব্দে রচনা লেখ।</p> <p>৩। সন্ধি বিচ্ছেদ</p> <p>৪। বাগধারা</p> <p>৫। বাক্য রূপান্তর</p> <p>৬। অনুচ্ছেদ পড়ে বোধ জ্ঞানের বহুবিকল্প প্রশ্ন।</p>	60
CT-1	<p>প্রথম শ্রেণি পরীক্ষা</p> <p>চিঠি, প্রতিবেদন।</p>	চিঠি, প্রতিবেদন।	15
CT-2	<p>দ্বিতীয় শ্রেণি পরীক্ষা</p> <p>১। সন্ধি বিচ্ছেদ</p>	<p>১। সন্ধি বিচ্ছেদ</p> <p>২। বাগধারা</p>	15

	২।বাগধারা ৩।অনুচ্ছেদ পড়ে বোধ জ্ঞানের বহুবিকল্প প্রশ্ন।	৩।অনুচ্ছেদ পড়ে বোধ জ্ঞানের বহুবিকল্প প্রশ্ন।	
	SBA		10
	Assignment/Presentation		10
	Total		100

2nd Semester

Name of the exam	Chapters	Pattern	Marks
Annual Exam	<p>Paper-1 বিভাগ: ক- কথোপকথন: ১। তুমি সম্প্রতি একটি বিজ্ঞানমেলায় অংশগ্রহণ করেছ। সেই অভিজ্ঞতা সম্বন্ধে তোমার বন্ধুর সাথে একটি কথোপকথন লেখ। ২। একটি ক্রিকেট ম্যাচ সরাসরি দেখার প্রতিক্রিয়া নিয়ে জনৈক বেতার প্রতিবেদকের সঙ্গে একটি কথোপকথন লেখ। ৩। পরীক্ষার প্রস্তুতি সম্বন্ধে বন্ধুর সাথে কথোপকথন লেখ। ভাষণ: ১.'ইন্টারনেট এর ইতিবাচক দিক ছাত্রজীবনকে করেছে সমৃদ্ধ।'-এই বিষয়ের উপর বিদ্যালয়ের বার্ষিক সাংস্কৃতিক অনুষ্ঠানে ভাষণ দেয়ার জন্য তোমার শ্রেণি শিক্ষক তোমাকে নির্বাচন করেছেন।একটি ভাষণ লেখ ২।বিদ্যালয়ের স্বাধীনতা দিবস উদযাপন অনুষ্ঠানের উপযোগী একটি ভাষণ লেখ। ৩।'প্রাতিষ্ঠানিক পড়ালেখার পাশাপাশি সহশিক্ষাক্রমিক কার্যক্রমের ভূমিকা অপরিসীম'-বিদ্যালয়ের তৃতীয় শ্রেণির নবীন বরণ অনুষ্ঠানে তোমাকে নির্বাচিত করা হয়েছে।বিষয়টির উপরএকটি ভাষণ লেখ। বিভাগ: খ- রচনা ১। তোমার ছোট বেলার একটি প্রিয় ঘটনা। ২। তোমার প্রিয় ব্যক্তিত্ব। ৩। ইন্টারনেটের আসক্তি ছাত্রজীবনের জন্যে বিপর্যয়- মতামত দাও। ৪।বাংলা নববর্ষ ৫।ছাত্রজীবনে সময়ের সঠিক ব্যবহার ব্যক্তিজীবনকে আলোকিত করে।</p> <p>Paper-2 ১।সন্ধি বিচ্ছেদ ২।বাগধারা, প্রবচন। ৩।বাক্য রূপান্তর ৪।ক্লোজ পরিচ্ছেদ। ৫। অনুচ্ছেদ পড়ে বোধ জ্ঞানের মুক্ত প্রশ্ন। ৬। শব্দার্থ। (১ম সেমিস্টারের সিলেবাস রিভিশন হবে)</p>	<p>১। দু'টি বিষয় থেকে যেকোনো একটি বেছে নিয়ে প্রায় ১২০ শব্দে উত্তর লেখ। ২।তিনটি রচনার মধ্যে থেকে যেকোনো একটি বিষয়ে প্রায় ২০০ শব্দে রচনা লেখ। ৩।সন্ধি বিচ্ছেদ ৪।প্রবচন, জোড়া শব্দ ৫।ক্লোজ পরিচ্ছেদ ৬। অনুচ্ছেদ পড়ে বোধ জ্ঞানের মুক্ত প্রশ্ন। ৭। শব্দার্থ</p>	60
CT-1	প্রথম শ্রেণি পরীক্ষা ভাষণ, কথোপকথন লেখা।	ভাষণ, কথোপকথন লেখা।	15
CT-2	দ্বিতীয় শ্রেণি পরীক্ষা প্রবচন, জোড়া শব্দ	প্রবচন, ক্লোজ পরিচ্ছেদ।	15

	ক্লোজ পরিচ্ছেদ। অনুচ্ছেদ পড়ে বোধ জ্ঞানের মুক্ত প্রশ্ন।	অনুচ্ছেদ পড়ে বোধ জ্ঞানের মুক্ত প্রশ্ন।	
	SBA		10
	Assignment/Presentation		10
	Total		100