

Syllabus

Grade: X

Session: 2025-2026



St. Joseph International School

97, Asad Avenue, Mohammadpur, Dhaka-1207, Bangladesh.

Telephone: 880-2-41022469

Website: www.sjis.edu.bd

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

English Language 1123

Book's Name:

- English language for Cambridge, O Level, course book - Relevant topics from this book will be revised for paper 1 and paper 2.
- Question paper bank.
- All the necessary handouts will be provided by the teachers to strengthen the quality of English language.

Objectives:

- Completing and revising O level syllabus with 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.

Name of the exam	Chapters	Pattern	Marks
CT Pre-Qualifying Examination	<ul style="list-style-type: none"> • Comprehension - understanding of explicit meanings, understanding of implicit meanings and attitude, understanding of how writers achieve effects and influence readers. 	Focused on Paper 1 question patterns.	15
	<ul style="list-style-type: none"> • Summary - 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. 		100
	<p>Paper 1</p> <ul style="list-style-type: none"> • Comprehension and use of language understanding of explicit meanings, understanding of implicit meanings and attitude, understanding of how writers achieve effects and influence readers. • Summary and short response 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. • Solving O level pattern question papers. <p>Paper 2</p>	Focused on Paper 1 and Paper 2 question patterns.	

	<ul style="list-style-type: none"> • Directed Writing – Discursive/argumentative/ persuasive speech, email, report, letters, article. • Composition – • Descriptive: A descriptive piece of writing describes a person, place or situation (including atmosphere) in detail so that the reader can picture it. • Narrative: A narrative piece of writing tells a story containing a sequence of connected events which may be real or imaginary • Task to improve the quality of English language – formal and informal English, sentence constructions, figurative language, crafted writing, contextualised vocabulary, basic grammar, punctuation. • Solving O level pattern question papers. • Necessary handouts will be provided by the teachers to strengthen the quality of English language. • Topics covered in grade 8 and 9, will be included. 		
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Mathematics 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 Course book (Second Edition),

Author: Audrey Simpson

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

Author: Michael Handbury, Jean Matthews

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

Name of the examination	Topic		Pattern	Marks
CT	Geometry, Trigonometry, Vectors		Structured questions	15
Pre-Qualifying Exam	1. Number 2. Set language and notation 3. Squares, square roots ,cubes and cube roots 4. Directed numbers 5. Vulgar and decimal fractions and percentages 6. Ordering 7. Standard form 8. The four operations 9. Estimation 10. Limits of accuracy 11. Ratio, proportion, rate 12. Percentages 13. Use of an electronic calculator 14. Time 15. Money 16. Personal and small business finance 17. Algebraic representation and formulae 18. Algebraic manipulation 19. Indices 20. Solutions of equations and inequalities 21. Graphical representation of inequalities	22. Sequences 23. Variation 24. Graphs in practical situations 25. Graphs of functions 26. Function notation 27. Coordinate geometry 28. Geometrical terms 29. Geometrical constructions 30. Similarity 31. Symmetry 32. Angles 33. Surds 34. Measures 35. Mensuration 36. Trigonometry 37. Vectors in two dimensions 38. Circle Theorem 39. Transformations 40. Probability 41. Categorical, numerical and grouped data 42. Statistical diagrams	Structured and unstructured questions Paper 1- Non calculator Marks: 100 Use of a calculator is not allowed Paper 2- Calculator Marks: 100A scientific calculator is required.	200

Bengali 3204

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.

Name of the exam	Chapters	Pattern	Marks
Pre-qualifying Exam	<p>Paper-1 বিভাগ:ক- চিঠি,প্রতিবেদন বিভাগ: খ- রচনা</p> <p>Paper-2 বিভাগ: ক- ১।সন্ধি বিচ্ছেদ ২।বাগধারা, প্রবচন, জোড়া শব্দ ৩।বাক্য রূপান্তর ৪।ক্লোজ পরিচ্ছেদ। বিভাগ: খ- ৫। অনুচ্ছেদ পড়ে বোধ জ্ঞানের বহুবিকল্প প্রশ্ন। বিভাগ: গ- ৬। অনুচ্ছেদ পড়ে বোধ জ্ঞানের মুক্ত প্রশ্ন। ৭। শব্দার্থ।</p>	<p>Paper-1 বিভাগ: ক- চিঠি , প্রতিবেদন -30 বিভাগ: খ- রচনা -60</p> <p>Paper-2 বিভাগ: ক- ১।সন্ধি বিচ্ছেদ-10 ২।বাগধারা, প্রবচন, জোড়া শব্দ।-10 ৩।বাক্য রূপান্তর -10 ৪।ক্লোজ পরিচ্ছেদ -20 বিভাগ: খ- ৫। অনুচ্ছেদ পড়ে বোধ জ্ঞানের বহুবিকল্প প্রশ্ন-14 বিভাগ: গ- ৬। অনুচ্ছেদ পড়ে বোধ জ্ঞানের মুক্ত প্রশ্ন। -36 ৭। শব্দার্থ -10</p>	<p>P1- 90 P2-110</p>
CT	<p>প্রথম শ্রেণি পরীক্ষা</p> <p>১।সন্ধি বিচ্ছেদ ২। চিঠি , প্রতিবেদন</p>	<p>১।সন্ধি বিচ্ছেদ ২।চিঠি , প্রতিবেদন</p>	<p>15</p>

Physics 5054

Books: 1. FEDERAL PHYSICS

A course for 'O' Level Second edition

Charles Chew, Leong See Cheng, Chow Siew Foong

2. Cambridge O Level Physics Second edition, Tom Duncan, Heather Kennett

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

- 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.

Knowledge with understanding

- scientific phenomena, facts, laws, definitions, concepts and theories
- scientific vocabulary, terminology and conventions (including symbols, quantities and units)
- scientific instruments and apparatus, including techniques of operation and aspects of safety
- scientific and technological applications with their social, economic and environmental implications.

Name of the exam	Chapters	Pattern	Marks
CT Pre-Qualifying Exam	4 Electricity and magnetism <ol style="list-style-type: none"> 1. 4.5 Electromagnetic effects 2. 4.6. Uses of an oscilloscope 	Paper 1 Multiple Choice Questions	15
	1 Motion, forces and energy <ul style="list-style-type: none"> • 1.1 Physical quantities and measurement techniques • 1.2 Motion • 1.3 Mass and weight • 1.4 Density • 1.5 Forces • 1.6 Moment • 1.7 Energy, work and power • 1.8 Pressure 2 Thermal physics <ul style="list-style-type: none"> • 2.1 Kinetic particle model of matter • 2.2 Thermal properties and temperature • 2.3 Transfer of thermal energy 3 Waves <ul style="list-style-type: none"> • 3.1 General properties of waves • 3.2 Light • 3.3 Electromagnetic spectrum • 3.4 Sound 4 Electricity and magnetism <ul style="list-style-type: none"> • 4.1 Simple magnetism and magnetic fields • 4.2 Electrical quantities • 4.3 Electric circuits • 4.4 Practical electricity • 4.5 Electromagnetic effects 	Paper 2 Structured Questions	P1- 40 P2- 80

	<ul style="list-style-type: none"> • 4.6 Uses of an oscilloscope 5 Nuclear physics <ul style="list-style-type: none"> • 5.1 The nuclear model of the atom • 5.2 Radioactivity 		
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Chemistry (5070)

Book: Chemistry Matters, by Toon, Kwong, Sadler and Sadler, Marshall Cavendish Education
Cambridge O Level Chemistry (Hodder Education Coursebook) by Bryan Earl & Doug Wilford

Aims

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.

Name of the exam	Syllabus	Question Pattern	Marks Distribution
CT Pre-Qualifying Exam	Unit 11: Organic Chemistry 11.1: Formulae, functional groups and terminology 11.2: Naming organic compounds 11.3: Fuels 11.4: Alkanes 11.5: Alkenes 11.6: Alcohols	MCQ and structured questions	15
	Unit 1: States of matter 1.1: Solids, liquids and gases 1.2: Diffusion Unit 2: Atoms, Elements and Compounds 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 Unit 3: Stoichiometry 3.1: Formulae 3.2: Relative masses of atoms and molecules 3.3: Mole and Avogadro constant Unit 4: Electrochemistry 4.1: Electrolysis 4.2: Hydrogen-oxygen fuel cells Unit 5: Chemical energetics 5.1: Exothermic and Endothermic reactions Unit 6: Chemical reactions 6.1: Physical and chemical changes 6.2: Rate of reaction 6.3: Reversible reactions and equilibrium 6.4: Redox Unit 7: Experimental techniques and chemical analysis 7.1: The characteristic properties of acids and bases 7.2: Oxides 7.3: Preparation of salts Unit 8: The Periodic Table 8.1: Arrangement of elements 8.2: Group I properties 8.3: Group VII properties 8.4: Transition elements	Multiple choice questions (P1) Structured questions (P2)	P1: 40 marks P2: 80 marks

	8.5: Noble gases Unit 9: Metals 9.1: Properties of metals 9.2: Uses of metals 9.3: Alloys and their properties 9.4: Reactivity series 9.5: Corrosion of metals 9.6: Extraction of metals Unit 10: Chemistry of the Environment 10.1: Water 10.2: Fertilisers 10.3: Air quality and climate		
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Biology 5090

Books: Cambridge O level Biology Book by D.G. Mackean, Dave Hayward

O level Past Question Paper

Objectives:

- 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.

Name of the exam	Chapters	Pattern	Marks and Time
CT Pre - Qualifying Exam	18 Biotechnology & Genetic Engineering 19 Relationships of organisms with one another and with the environment	<ul style="list-style-type: none"> • MCQ, • Short-answer and structured questions • Labeling/Drawing 	Duration: 25 mins Total marks: 15
	All chapters from the CIE O-level syllabus 2026 1. Cells 2. Classification 3. Movement into and out of cells 4. Biological molecules 5. Enzymes 6. Plant nutrition 7. Transport in flowering plants 8. Human nutrition 9. Human gas exchange 10. Respiration 11. Transport in humans 12. Disease and immunity 13. Excretion 14. Coordination and control 15. Coordination and response in plants 16. Development of organisms and continuity of life 17. Inheritance 18. Biotechnology and genetic modification 19. Relationships of organisms with one another and with the environment	Paper 1: MCQ Four-option Multiple Choice Questions Paper 2: Theory Short-answer and structured questions	Paper 1 Duration: 1 hour Total marks: 40 Paper 2 Duration: 1 hour 45 minutes Total marks: 80

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 Course book (Second Edition) Author: Sue Pemberton

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

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

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

Name of the examination	Topics	Pattern	Marks
CT	Differentiation and Integration	Structured questions	15
Pre-Qualifying Exam	Complete O Level Additional Mathematics Syllabus	Structured and unstructured questions Paper 1(non-calculator) Marks 80 Paper 2(calculator) Marks 80	160

Computer Science 2210

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

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

Name of the exam	Chapters	Pattern	Marks
CT Pre-qualifying Exam Paper: 1	Paper : 1 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 Paper : 2 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, rearranging given statement is correct order	15
	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 Chapter-3: Hardware=> 3.1: Computer Architecture 3.2: Input and Output Device 3.3: Data Storage 3.4: Network Hardware Chapter-4:- Software 4.1 Types of software and interrupts 4.2 Types of programming language, translators and integrated development environments (IDEs) Chapter-5: The internet and its uses 5.1 The internet and the World Wide Web (WWW) 5.2 Digital currency	T/F, F/B, MCQ, One sentence Q/A, S/Q, B/Q, Creative questions, rearranging given statement is correct order	75

	5.3 Cyber security Chapter-6: Automated and emerging technologies 6.1 Automated systems 6.2 Robotics 6.3 Artificial intelligence (AI)		
Pre-qualifying Exam Paper : 2	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 Chapter: 9 => Database 9.1 Databases 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, rearranging given statement is correct order	75

Accounting 7707

Book's name: 1. Business Accounting 1

Author: Alan Sangster and Lewis Gordon

2. Question paper bank (Paper 1 and Paper 2)

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.

Pre-Qualifying Examination

Name of the exam	Topic	Pattern	Marks
CT	Non-current assets, Provision for depreciation and Disposal account	Structured written paper	15
Pre-Qualifying	Complete Cambridge O Level Accounting Syllabus	MCQ	P 1: 35
		Structured written paper	P 2: 100
	SBA		10
	Assignment / Class Copy		10
	Total		100

Qualifying Examination

Name of the exam	Topics	Pattern	Marks
Qualifying Examination	Complete Cambridge O Level Accounting Syllabus	MCQ	P 1: 35
		Structured written paper	P 2: 100
	Total marks		100

Business Studies (7115)

Books: Cambridge IGCSE and O Level Business Studies (5 th Edition)

- Author: Karen Borrington, Peter Stimpson

Objectives: Learners will be able to: •understand different forms of business organisations, the environments in which businesses operate and business functions such as marketing, operations and finance •appreciate the role of people in business success.

Name of the exam	Topics	Pattern	Marks
CT	External influences on business activity 1. Statement of financial position 2. Analysis of accounts	<ul style="list-style-type: none"> • Short questions • Problem solving • Calculation 	15
Pre-Qualifying Exam	1 Understanding business activity 1. Business activity 2. Classification of businesses 3. Enterprise, business growth and size 4. Enterprise, business growth and size continued 5. Types of business organization 6. Business objectives and stakeholder objectives 2 People in business 2.1 Motivating employees 2.2 Organisation and management 2.3 Recruitment, selection and training of employees 2.4 Internal and external communication 3 Marketing 3.1 Marketing, competition and the customer 3.2 Market research 3.3 Marketing mix 3.4 Marketing strategy 4 Operations management 4.1 Production of goods and services 4.2 Costs, scale of production and break-even analysis 4.3 Achieving quality production 4.4 Location decisions 5 Financial information and decisions 5.1 Business finance: needs and sources 5.2 Cash-flow forecasting and working capital 5.3 Income statements 5.3 Income statements continued 5.4 Statement of financial position 5.5 Analysis of accounts 6 External influences on business activity 6.1 Economic issues 6.2 Environmental and ethical issues	<ul style="list-style-type: none"> • Short Answer and • Data Response (P 1) • Case Study (P 2) 	P 1: 80 P 2: 80

Economics (2281)

Books: Cambridge IGCSE® and O Level Economics Coursebook (Second Edition)

Author: Susan Grant

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

Name of the exam	Topics	Pattern	Marks
Pre-Qualifying Exam	Economic development <ul style="list-style-type: none"> • Living standards • Poverty • Population • Differences in economic development between countries International trade and globalisation <ul style="list-style-type: none"> • International specialization • Globalisation, free trade and protection • Foreign exchange rates • Current account of balance of payments 	<ul style="list-style-type: none"> • Short questions • Structured Questions 	15
	1. The basic economic problem <ol style="list-style-type: none"> 1. The nature of the economic problem 2. The factors of production 3. Opportunity cost 4. Production possibility curve (PPC) diagrams 2. The allocation of resources <ol style="list-style-type: none"> 2.1 Microeconomics and macroeconomics 2.2 The role of markets in allocating resources 2.3 Demand 2.4 Supply 2.5 Price determination 2.6 Price changes 2.7 Price elasticity of demand (PED) 2.8 Price elasticity of supply (PES) 2.9 Market economic system 2.10 Market failure 2.11 Mixed economic system 3 Microeconomic decision makers <ol style="list-style-type: none"> 3.1 Money and banking 3.2 Households 3.3 Workers 	<ul style="list-style-type: none"> • Multiple Choice (P 1) • Structured Questions (P 2) 	P 1: 30 P 2: 90

	<p>3.4 Trade unions</p> <p>3.5 Firms</p> <p>3.6 Firms and production</p> <p>3.7 Firms' costs, revenue and objectives</p> <p>3.8 Market structure</p> <p>4 Government and the macroeconomy</p> <p>4.1 The role of government</p> <p>4.2 The macroeconomic aims of government</p> <p>4.3 Fiscal policy</p> <p>4.3 Fiscal policy continued</p> <p>4.4 Monetary policy</p> <p>4.5 Supply-side policy</p> <p>4.6 Economic growth</p> <p>4.7 Employment and unemployment</p> <p>4.8 Inflation and deflation</p> <p>5 Economic development</p> <p>5.1 Living standards</p> <p>5.2 Poverty</p> <p>5.3 Population</p> <p>5.4 Differences in economic development between countries</p> <p>6 International trade and globalisation</p> <p>6.1 International specialization</p> <p>6.2 Globalisation, free trade and protection</p> <p>6.3 Foreign exchange rates</p> <p>6.4 Current account of balance of payments</p>		
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English 1123

Name of the Examination	Chapters	Pattern	Marks
Qualifying Exam	<p>Paper 1</p> <ul style="list-style-type: none"> • Comprehension - understanding of explicit meanings, understanding of implicit meanings and attitude, understanding of how writers achieve effects and influence readers. • Summary - 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. • Solving O level pattern question papers. <p>Paper 2</p> <ul style="list-style-type: none"> • Directed Writing – Discursive/argumentative/persuasive speech, email, report, letters, article. • Composition – • Descriptive: A descriptive piece of writing describes a person, place or situation (including atmosphere) in detail so that the reader can picture it. • Narrative: A narrative piece of writing tells a story containing a sequence of connected events which may be real or imaginary • Task to improve the quality of English language – formal and informal English, sentence constructions, figurative language, crafted writing, contextualised vocabulary, basic grammar, punctuation. • Solving O level pattern question papers. • Necessary handouts will be provided by the teachers to strengthen the quality of English language. • Topics covered in grade 8 and 9, will be included. 	Focused on Paper 1 and Paper 2 question patterns.	100

Mathematics D 4024

Name of the examination	Topic	Pattern	Marks
Qualifying Exam	Complete O Level Maths- D, Syllabus	Structured and unstructured questions Paper 1- Non- calculator Marks: 100 Use of a calculator is not allowed Paper 2- Calculator Marks: 100 A scientific calculator is required	200

Bangla 3204

Name of the exam	Chapters	Pattern	Marks
Qualifying Exam	<p>Paper-1 বিভাগ: ক- চিঠি , প্রতিবেদন, কথোপকথন, ভাষণ । বিভাগ: খ- রচনা</p> <p>Paper-2 বিভাগ: ক- ১। সন্ধি বিচ্ছেদ ২। বাগধারা, প্রবচন, জোড়া শব্দ। ৩। বাক্য রূপান্তর , ৪। ক্রোজ পরিচ্ছেদ বিভাগ: খ- ৫। অনুচ্ছেদ পড়ে বোধ জ্ঞানের বহুবিকল্প প্রশ্ন বিভাগ: গ- ৬। অনুচ্ছেদ পড়ে বোধ জ্ঞানের মুক্ত প্রশ্ন। ৭। শব্দার্থ</p>	<p>Paper-1 বিভাগ: ক- চিঠি , প্রতিবেদন, কথোপকথন, ভাষণ- 30 বিভাগ: খ- রচনা -60</p> <p>Paper-2 বিভাগ: ক- ১। সন্ধি বিচ্ছেদ -10 ২। বাগধারা, প্রবচন, জোড়া শব্দ। -10 ৩। বাক্য রূপান্তর , -10 ৪। ক্রোজ পরিচ্ছেদ, - 20 বিভাগ: খ- ৫। অনুচ্ছেদ পড়ে বোধ জ্ঞানের বহুবিকল্প প্রশ্ন-14 বিভাগ: গ- ৬। অনুচ্ছেদ পড়ে বোধ জ্ঞানের মুক্ত প্রশ্ন। -36 ৭। শব্দার্থ -10</p>	100

Physics 5054

Name of the exam	Chapters	Pattern	Marks
Qualifying Exam	1 Motion, forces and energy 1.1 Physical quantities and measurement techniques 1.2 Motion 1.3 Mass and weight 1.4 Density 1.5 Forces 1.6 Momentum 1.7 Energy, work and power 1.8 Pressure	Paper 1 Multiple Choice Questions Paper 2 Structured Questions Paper 3 Laboratory Question	
	2 Thermal physics 2.1 Kinetic particle model of matter 2.2 Thermal properties and temperature 2.3 Transfer of thermal energy		40
	3. Waves 3.1 General properties of waves 3.2 Light 3.3 Electromagnetic spectrum 3.4 Sound		80
	4 Electricity and magnetism 4.1 Simple magnetism and magnetic fields 4.2 Electrical quantities 4.3 Electric circuits 4.4 Practical electricity 4.5 Electromagnetic effects 4.6 Uses of an oscilloscope		40
	5 Nuclear physics 5.1 The nuclear model of the atom 5.2 Radioactivity		
	6 Space physics 1. 6.1 Earth and the Solar System 2. 6.2 Stars and the		

Chemistry 5070

Exam	Syllabus	Question Pattern	Marks Distribution
Qualifying Exam	<p>Unit 1: States of matter 1.1: Solids, liquids and gases 1.2: Diffusion</p> <p>Unit 2: Atoms, Elements and Compounds 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</p> <p>Unit 3: Stoichiometry 3.1: Formulae 3.2: Relative masses of atoms and molecules 3.3: Mole and Avogadro constant</p> <p>Unit 4: Electrochemistry 4.1: Electrolysis 4.2: Hydrogen-oxygen fuel cells</p> <p>Unit 5: Chemical energetics 5.1: Exothermic and Endothermic reactions</p> <p>Unit 6: Chemical reactions 6.1: Physical and chemical changes 6.2: Rate of reaction 6.3: Reversible reactions and equilibrium 6.4: Redox</p> <p>Unit 7: Experimental techniques and chemical analysis 7.1: The characteristic properties of acids and bases 7.2: Oxides 7.3: Preparation of salts</p> <p>Unit 8: The Periodic Table 8.1: Arrangement of elements 8.2: Group I properties 8.3: Group VII properties 8.4: Transition elements 8.5: Noble gases</p> <p>Unit 9: Metals 9.1: Properties of metals 9.2: Uses of metals 9.3: Alloys and their properties 9.4: Reactivity series 9.5: Corrosion of metals 9.6: Extraction of metals</p> <p>Unit 10: Chemistry of the Environment 10.1: Water 10.2: Fertilisers 10.3: Air quality and climate</p>	<p>Multiple choice questions (P1)</p> <p>Structured questions (P2)</p> <p>Practical exam (P3)</p>	<p>P1: 40 marks</p> <p>P2: 80 marks</p> <p>P3: 40 marks</p>

Biology 5090

Name of the exam	Chapters	Pattern	Marks
Qualifying Exam	All chapters from the CIE O level syllabus 2026 1 Cells 2 Classification 3 Movement into and out of cells 4 Biological molecules 5 Enzymes 6 Plant nutrition 7 Transport in flowering plants 8 Human nutrition 9 Human gas exchange 10 Respiration 11 Transport in humans 12 Disease and immunity 13 Excretion 14 Coordination and control 15 Coordination and response in plants 16 Development of organisms and continuity of life 17 Inheritance 18 Biotechnology and genetic modification 19 Relationships of organisms with one another and with the environment	Paper 1: MCQ four-option multiple-choice questions Paper 2: Theory Short-answer and structured questions Paper 3: Practical Questions will be based on the experimental skills in Section 4 of CIE syllabus	Paper 1: Duration: 1 hour Total marks:40 Paper 2: Duration: 1 hour 45 minutes Total marks:80 Paper 3: Duration: 1 hour 30 minutes Total marks:40

Additional Mathematics 4037

Name of Examination	Topic	Pattern	Marks
Qualifying Exam	Complete O Level Additional Mathematics Syllabus	Structured and unstructured questions Paper 1 (Non- calculator) Marks 80 Paper 2 (Calculator) Marks 80	160

Computer Science 2210

Name of the exam	Chapters	Pattern	Marks
Qualifying Paper: 2	<p>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.</p> <p>Chapter: 8 => Programming 8.1 Programming Concept 8.2 Arrays 8.3 File handling</p> <p>Chapter: 9 => Database 9.1 Databases</p> <p>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</p>	T/F, F/B, MCQ, One sentence Q/A, S/Q, B/Q, Creative questions, rearranging given statement is correct order	75

Accounting 7707

Name of the exam	Topics	Pattern	Marks
Qualifying Exam	1 The fundamentals of accounting 1. The purpose of accounting 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 3.2 Correction of errors 3.3 Bank reconciliation 3.4 Control accounts 4 Accounting procedures 4.1 Capital and revenue expenditure and receipts 4.2 Accounting for depreciation and disposal of non-current assets 4.3 Other payables and other receivables 4.4 Irrecoverable debts and provision for doubtful debts 4.5 Valuation of inventory 5 Preparation of financial statements 5.1 Sole traders 5.2 Partnerships 5.3 Limited companies 5.4 Clubs and societies 5.5 Manufacturing accounts 5.6 Incomplete records 6 Analysis and interpretation 6.1 Calculation and understanding of accounting ratios 6.2 Interpretation of accounting ratios 6.3 Inter-firm comparison 6.4 Interested parties 6.5 Limitations of accounting statements 7 Accounting principles and policies 7.1 Accounting principles 7.2 Accounting policies	MCQ Structured written paper	P 1: 35 P 2: 100

Business Studies (7115)

Name of the exam	Chapters	Pattern	Marks
Qualifying Exam	1 Understanding business activity 7. Business activity 8. Classification of businesses 9. Enterprise, business growth and size 10. Enterprise, business growth and size continued 11. Types of business organization 12. Business objectives and stakeholder objectives 2 People in business 2.1 Motivating employees 2.2 Organisation and management 2.3 Recruitment, selection and training of employees 2.4 Internal and external communication 3 Marketing 3.1 Marketing, competition and the customer 3.2 Market research 3.3 Marketing mix 3.4 Marketing strategy 4 Operations management 4.1 Production of goods and services 4.2 Costs, scale of production and break-even analysis 4.3 Achieving quality production 4.4 Location decisions 5 Financial information and decisions 5.1 Business finance: needs and sources 5.2 Cash-flow forecasting and working capital 5.3 Income statements 5.3 Income statements continued 5.4 Statement of financial position 5.5 Analysis of accounts 6 External influences on business activity 6.1 Economic issues 6.2 Environmental and ethical issues 6.3 Business and the international economy 6.3 Business and the international economy continued	<ul style="list-style-type: none"> • Short Answer and Data Response (P 1) • Case Study (P 2) 	P 1: 80 P 2: 80

Economics (2281)

Name of the exam	Chapters	Pattern	Marks
Qualifying Exam	<p>The basic economic problem</p> <ol style="list-style-type: none"> 1. The nature of the economic problem 2. The factors of production 3. Opportunity cost 4. Production possibility curve (PPC) diagrams <p>The allocation of resources</p> <ol style="list-style-type: none"> 2.1 Microeconomics and macroeconomics 2.2 The role of markets in allocating resources 2.3 Demand 2.4 Supply 2.5 Price determination 2.6 Price changes 2.7 Price elasticity of demand (PED) 2.8 Price elasticity of supply (PES) 2.9 Market economic system 2.10 Market failure 2.11 Mixed economic system <p>Microeconomic decision makers</p> <ol style="list-style-type: none"> 3.1 Money and banking 3.2 Households 3.3 Workers 3.4 Trade unions 3.5 Firms 3.6 Firms and production 3.7 Firms' costs, revenue and objectives 3.8 Market structure <p>Government and the macroeconomy</p> <ol style="list-style-type: none"> 4.1 The role of government 4.2 The macroeconomic aims of government 4.3 Fiscal policy 4.3 Fiscal policy continued 4.4 Monetary policy 4.5 Supply-side policy 4.6 Economic growth 4.7 Employment and unemployment 4.8 Inflation and deflation <p>Economic development</p> <ol style="list-style-type: none"> 5.1 Living standards 5.2 Poverty 5.3 Population 5.4 Differences in economic development between countries <p>International trade and globalisation</p> <ol style="list-style-type: none"> 6.1 International specialization 6.2 Globalisation, free trade and protection 6.3 Foreign exchange rates 6.4 Current account of balance of payments 	<ul style="list-style-type: none"> • Multiple Choice (P 1) • Structured Questions (P 2) 	<p>P 1: 30 P 2: 90</p>