

Kothari International School, Noida
IGCSE-(Grade 9 & 10)
Annual Curriculum Overview for the Session 2024-2025

SUBJECT – ENGLISH LANGUAGE

YEAR 1

<u>TOPIC/UNIT</u>	<u>CONTENT</u>
Unit 1: Descriptive Writing	<ul style="list-style-type: none">● Descriptive Language● Descriptive Language Techniques● Genre Blending● Planning and Structuring: Openings and endings
Unit 2: Summary Writing	<ul style="list-style-type: none">● Identifying paragraph topics● Selecting summary points● Skimming and scanning● Comparing text styles● Summary techniques
Unit 3: Persuasive Writing	<ul style="list-style-type: none">● Persuasive devices- Rhetorical questions, repetition, antithesis, negatives, anaphora, polysyndeton, asyndeton, lists, power of three, imperatives, irony, hypophora and hedge words● Persuasive writing forms● Collating and evaluating claims● analysing and refuting an argument● The rhetorical triangle● Discourse markers
Unit 4: Writer's Effect	<ul style="list-style-type: none">● Inferring writer's attitude● Writer's effect analysis● Journal Entry● Article● Leaflet● Formal Letter● Blog

Unit 5- Directed Writing	<ul style="list-style-type: none"> ● Analysing genre ● Transforming genre ● Adopting appropriate style and structure ● Rhetoric ● Punctuation
Unit 6: Narrative Writing	<ul style="list-style-type: none"> ● Understanding Mood and Atmosphere ● Structure and elements ● Freytag's Pyramid ● Story beginning and ending
Unit 7: Informative Writing	<ul style="list-style-type: none"> ● Reading informative texts ● Reading to infer ● Reading Magazine articles ● Reading and annotation ● writing
Unit 8: Genre Transformation	<ul style="list-style-type: none"> ● Writing in a new genre

YEAR 2

Unit 9 and Unit 3: Revise Narrative Writing and Descriptive Writing	<ul style="list-style-type: none"> ● Mood and Atmosphere - Reading to Identify Mood and Atmosphere ● Devices and vocabulary ● Freytag's Pyramid ● Plan Box ● Grammar, Style ● New twist to an existing Story ● Exam Style ● Narrative Writing Topics ● Adjectival Order ● Annotate the given text to identify descriptors ● Specific Description ● 5 Sensory Details
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	<ul style="list-style-type: none"> ● Plan Box ● Vocabulary - Mind Map ● Descriptive
Unit 1 Summary Writing	<ul style="list-style-type: none"> ● Skimming and scanning ● Annotations ● Types of Sentences ● Style and Structure ● Word Choices - Synonyms, Content words and Structure words ● Summary Writing ● Comprehension - Text A Paper 1 ● Vocabulary and inference.
Unit 8 and 11: Writers Effects	<ul style="list-style-type: none"> ● Word Category ● Sensory Details ● Devices ● Claims ● PEE Technique ● Exam Style Questions
Unit 2 Directed Writing	<ul style="list-style-type: none"> ● Journal Writing ● Article Writing ● Leaflet Writing ● Formal Letter Writing ● Blog Writing

SUBJECT - LANGUAGE ACQUISITION: FRENCH

YEAR 1

<u>TOPIC/UNIT</u>	<u>CONTENT</u>
Unit 1: Mon quotidien	<ul style="list-style-type: none"> ● Daily Activities ● Household activities ● Modes of transports ● College life
Unit 2: La pleine forme	<ul style="list-style-type: none"> ● Balanced Diet ● Health problems ● Cafés & Restaurants

	<ul style="list-style-type: none"> ● Traditional dishes
Unit 3: Une famille a l'étranger	<ul style="list-style-type: none"> ● Family members & my house ● My Leisure activités ● Message writing ● Ordering a meal
Unit 4: Faites la fête!	<ul style="list-style-type: none"> ● Festival ● Revision of tenses
Unit 5: Ma ville, demain...?	<ul style="list-style-type: none"> ● Attractions of my city ● Asking for directions ● Problems with Public places
Unit 5: Ma ville, demain...?	<ul style="list-style-type: none"> ● Attractions of my city ● Asking for directions ● Problems with Public places
Unit 6: La nature- amie, ennemie ou victime ?	<ul style="list-style-type: none"> ● My environment ● Climat ● Weather ● Adverbs
Unit 7 : Bonjour de Francophonie	<ul style="list-style-type: none"> ● Myself ● My city ● My daily routine

YEAR 2

Unit 8: L'école et après?	<ul style="list-style-type: none"> ● French education system ● My school ● Sabbatical Year
Unit 9: Au travail	<ul style="list-style-type: none"> ● My future plans ● Internships ● Part time jobs ● My first job
Unit 10: A l'écoute du monde	<ul style="list-style-type: none"> ● Mobile phone ● Computer in Daily life ● Dangers of Internet ● Net-Etiquette

Unit 11: En Voyage	<ul style="list-style-type: none"> ● Travel stories ● Importance of Travelling ● Accommodation ● Travel accidents
Unit 12: Jeune au XX siecle	<ul style="list-style-type: none"> ● Unemployment ● Business startups ● Possessive pronouns

SUBJECT - ECONOMICS

YEAR 1

<u>TOPIC/UNIT</u>	<u>CONTENT</u>
UNIT-1: The basic economic problem	1.1 The nature of economic problem 1.2 Factors of production 1.3 Opportunity cost Production possibility curves
UNIT-2: The allocation of resources	2.1 Microeconomics & macroeconomics 2.2 The role of market in allocating resources 2.3 Demand 2.4 Supply 2.5 Price determination 2.6 Price changes 2.7 Price elasticity of demand 2.8 Price elasticity of supply 2.9 Market economic system 2.10 Market failure 2.11 Mixed economic system
UNIT-3: Microeconomic decision makers	3.1 Money & banking 3.2 Households 3.3 Workers 3.4 Trade unions 3.5 Firms 3.6 Firms & production 3.7 Firms, costs, revenue & objectives

	3.8 Market structure
UNIT-4: Government & the macroeconomy	4.1 The role of government 4.2 The macroeconomic aim of government 4.3 Fiscal policy 4.4 Monetary policy 4.5 Supply side policies 4.6 Economic growth 4.7 Employment & unemployment 4.8 Inflation & deflation
UNIT- 5: Economic development	5.1 Living standard 5.2 Poverty 5.3 Population 5.4 Differences in economic development between countries
UNIT-6: International trade & globalization	6.1 International specialization 6.2 Globalization, free trade and protection 6.3 Foreign exchange rates 6.4 Current account of balance of payments

YEAR 2

UNIT- 4: Government & the macroeconomy	4.4 Monetary policy 4.5 Supply side policies 4.6 Economic growth 4.7 Employment & unemployment 4.8 Inflation & deflation
UNIT- 5: Economic development	5.1 Living standard 5.2 Poverty 5.3 Population 5.4 Differences in economic development between countries
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SUBJECT – GLOBAL PERSPECTIVES

YEAR 2

<u>TOPIC/UNIT</u>	<u>CONTENT</u>
UNIT 1: Individual Report	<ul style="list-style-type: none">● Preparing the final draft for Component 2
Unit 2 : Group Report	<ul style="list-style-type: none">● Research● Planning● Collaboration● Reflection● Preparing the draft for Component 3
Unit 3: Written Exam	<ul style="list-style-type: none">• Analysis• Evaluation• Research• Research / Analysis – Decision making• Analysis / Evaluation – Conclusions• Analysis / Communication – Synthesis
Unit 4: Reflection	<ul style="list-style-type: none">● Each learner refers to their journal to complete a short version of the Reflective Paper.● Producing the final draft of Component 3
Unit 5- Final Drafting of Component 2 and 3	<ul style="list-style-type: none">● Preparation and Submission

SUBJECT – ENGLISH LITERATURE

YEAR 1 TILL AUGUST

<u>TOPIC/UNIT</u>	<u>CONTENT</u>
UNIT 1	<ul style="list-style-type: none">● Life and Literature● Story Arc

<p>Prose Novel - To kill a Mockingbird</p>	<ul style="list-style-type: none"> ● Freytag’s Pyramid ● Novel Background ● Title ● Characterisation and setting ● Mapping the Story Arc ● Themes ● Historical and Social Perspectives ● Prejudice and suppression ● Plot Summary ● Detailed chapter wise reading ● Chapter wise Summary and Analysis
<p>Unit 2 - Poetry Analysis</p>	<ul style="list-style-type: none"> ● Poetry Analysis ● Identify Subject ● Identify Theme ● Identify Rhyme and Rhythm ● Identify Mood, Tone and Atmosphere ● Form and Structure ● Imagery ● Other Literary Devices ● Annotations
<p>Unit 3 Songs of Ourselves Volume 2</p> <p>‘The Bus’ Arun Kolatkar</p> <p>‘At the Bus Station’ Julius Chingono</p> <p>‘The Road’ Nancy Fotheringham Cato</p>	<ul style="list-style-type: none"> ● ‘The Bus’ - Culture and Religion ● The Bus - Settings of Jejuri ● Imagery of the Journey ● Culture and Religion ● Descriptive Devices ● At the Bus Station ● Settings and Theme ● Implicit Meaning ● Hyperbole ● Humour and Satire ● The Road ● Theme ● Symbolism and Metaphors ● Parallelism ● Imagery and descriptions

YEAR 2

<u>TOPIC/UNIT</u>	<u>CONTENT</u>
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Paper 2 - Drama	<ul style="list-style-type: none"> ● A Streetcar Named Desire by Tennessee Williams
Paper 2 Drama	<ul style="list-style-type: none"> ● A Midsummer Night's Dream by William Shakespeare
Paper 1 Poetry	<ul style="list-style-type: none"> ● Football at Slack ● The Horses ● Roe-Deer ● Telegraph ● Wires ● Cat and Mouse ● Snowdrop
	<ul style="list-style-type: none"> ● REVISION OF All the fifteen poems by Ted Hughes (Paper 1)
	<ul style="list-style-type: none"> ● REVISION OF Rebecca and To Kill a Mockingbird (Paper 1) ● A Streetcar Named Desire by Tennessee Williams (Paper 2)
	<ul style="list-style-type: none"> ● REVISION OF A Midsummer Night's Dream by William Shakespeare

SUBJECT – PHYSICS

YEAR 1

<u>TOPIC/UNIT</u>	<u>CONTENT</u>
Measurement	<ul style="list-style-type: none"> ● Measurement of length, mass and density using conventional and non-conventional methods.
Motion	<ul style="list-style-type: none"> ● Various types of motion and it's graphical representation.
Forces and motion turning effect of forces	<ul style="list-style-type: none"> ● Effects of forces and motion ● Concept of center of gravity ● Equilibrium ● Turning effect or moment of force

Forces and matter, Energy transformation & transfer, Energy resource,	<ul style="list-style-type: none"> ● Forces and its effect on matter ● Spring ● Forms of energy ● Conservation of energy ● Energy calculations
Kinetic Model of matter, Thermal properties	<ul style="list-style-type: none"> ● states of matter, Kinetic Model, forces and kinetic theory, gases and kinetic theory ● Concept of temperature, thermal expansion, capacity & latent heat
Energy Transfer Sound Light	<ul style="list-style-type: none"> ● Conduction, convection, Radiation, ● Speed of sound its production detection ● Reflect lights, refraction, total internal reflection, lenses
Properties of waves, Spectra	<ul style="list-style-type: none"> ● Waves concept, ● Speed, frequency & wavelength, ● Wave equation

YEAR 2

Electrical Quantities	<ul style="list-style-type: none"> ● Electrical Charge, ● Electric Current, ● Electromotive Force, ● Potential Difference ● Electrical energy and electrical power
Electrical Circuits & electrical safety	<ul style="list-style-type: none"> ● Components of electrical circuits like resistors, Basic series & parallel circuits and other circuits like LDR, Relay, MCB etc, electrical safety components and their working
Electromagnetic Effects	<ul style="list-style-type: none"> ● Electromagnetic Induction, ● AC generator, ● Magnetic Effect of Current, Force on a current carrying conductor, DC motor, Transformer
Nuclear model of atom	<ul style="list-style-type: none"> ● Structure of an atom, concept of nucleus, electron proton and neutron basic information and their discovery Isotopes
Radioactivity	<ul style="list-style-type: none"> ● Radioactivity ● And it's detection, ● Nuclear emissions and its types, Radioactive decay

	<ul style="list-style-type: none"> ● Safety and precautions
Earth and its solar system	<ul style="list-style-type: none"> ● planets, galaxy, rotation of earth around the sun
Formation of star, life cycle Hubble constant	<ul style="list-style-type: none"> ● life cycle of star different phases of moon. ● Hubble constant and its application, ● Doppler effect

SUBJECT – CHEMISTRY

YEAR 1

<u>TOPIC/UNIT</u>	<u>CONTENT</u>
1. States of Matter 2. Atomic Structure	<ul style="list-style-type: none"> ● States of Matter ● Kinetic Particle theory of Matter ● Mixtures of substances and diffusion ● Atoms and Elements ● Isotopes ● Electronic Configuration of elements
2. Atomic Structure 3. Chemical Bonding 4. Chemical Energetics	<ul style="list-style-type: none"> ● Non- Metallic substance and covalent bonding ● Ions and Ionic Bonding ● Giant Structures ● Physical and Chemical Changes ● Exothermic and Endothermic Reactions
5. Chemical formula and equations 6. Chemical Calculations	<ul style="list-style-type: none"> ● Chemical names and formulae ● Chemical equations for reactions ● Relative masses of atoms and molecules ● The mole and Avogadro's constant
6. Chemical Calculations 7. Electrochemistry	<ul style="list-style-type: none"> ● The mole and chemical equations ● Moles and solution chemistry ● Types of electrical conductivity ● Products of electrolysis ● Hydrogen as a fuel
8. Rates of Reaction 9. Reversible Reactions and Equilibrium 10. Redox Reactions	<ul style="list-style-type: none"> ● Factors affecting rates of reaction ● Collisions theory of reaction rate ● Reversible Reactions

	<ul style="list-style-type: none"> ● Haber Process and Contact process ● Fertilizers ● Combustion, oxidation and reduction ● Redox Reactions
11. Acids and Bases 12. Preparation of salts	<ul style="list-style-type: none"> ● The nature of acids and bases ● Characteristics reactions of acids ● The importance of salts-an introduction Preparation of salts
13. The Periodic Table 14. Chemistry of our Environment	<ul style="list-style-type: none"> ● Classifying the elements ● Trends in groups ● Trends across a period ● Air Quality ● Carbon dioxide, methane and climate change Water
15. Metallic Elements and Alloys 16. Reactivity of metals	<ul style="list-style-type: none"> ● The properties of metals ● Uses of metals ● Alloys ● The metal reactivity Series
17. Extraction and corrosion of metals	<ul style="list-style-type: none"> ● Metal displacement reactions ● Metal Extraction and the reactivity series Corrosion metals

YEAR 2

<u>TOPIC/UNIT</u>	<u>CONTENT</u>
18. Experimental design and 19. Separation Techniques	<ul style="list-style-type: none"> ● Experimental Design ● Separation and purification ● Chromatography
<u>20.</u> Petrochemicals and Polymers	<ul style="list-style-type: none"> ● Petroleum and its products ● Polymers ● Plastics
<u>21.</u> Introduction to Organic Chemistry	<ul style="list-style-type: none"> ● Names and formulae of organic compounds ● Structural formulae, homologous series and isomerism
<u>22.</u> Reactions of organic compounds	<ul style="list-style-type: none"> ● Characteristics reactions of different homologous series ● Chemistry of ethanol

23. Reactions of organic compounds <u>24. Chemical Analysis</u>	<ul style="list-style-type: none"> ● Carboxylic and Esters ● Test to identify common cations and anions
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SUBJECT – BIOLOGY

YEAR 1

<u>TOPIC/UNIT</u>	<u>CONTENT</u>
UNIT-1 Characteristics and classification of living organisms	1.1 Characteristics of Living Organisms 1.2 The Biological classification system 1.3 The Dichotomous Keys 1.4 The kingdoms 1.5 Groups within plant and animal kingdoms 1.6 Viruses
UNIT-2 Cells	2.1 Animal and plant cell 2.2 Bacterial cell 2.3 Specialised cells in plants and humans 2.4 Sizes of Specimens
UNIT-3 Movement into and out of the cells	3.1 Diffusion 3.2 Osmosis 3.3 Active transport
UNIT-4 Biological molecules	4.1 Carbohydrates, fats and Proteins 4.2 The structure of DNA
UNIT-5 Enzymes	5.1 Biological Catalysts 5.2 Factors that affect Enzymes

<p>UNIT-6</p> <p>Plant nutrition</p>	<p>6.1 Making Carbohydrate using Light Energy</p> <p>6.2 Leaves</p> <p>6.3 Photosynthesis</p>
<p>UNIT-7</p> <p>Human nutrition</p>	<p>7.1 Diet</p> <p>7.2 Human digestive system</p> <p>7.3 Digestion</p> <p>7.4 Absorption and Assimilation</p>
<p>UNIT-8</p> <p>Transport in plants</p>	<p>8.1 Xylem and Phloem</p> <p>8.2 Transport of water</p> <p>8.3 Translocation of sucrose and amino acids</p>
<p>UNIT-9</p> <p>Transport in animals</p>	<p>9.1 Circulatory system</p> <p>9.2 The heart</p> <p>9.3 Blood Vessels</p>
<p>UNIT-10</p> <p>Diseases and immunity</p>	<p>10.1 Transmission of Pathogens</p> <p>10.2 The immune response</p>
<p>UNIT-11</p> <p>Respiration and gas exchange in humans</p>	<p>11.1 Gas exchange in cells.</p> <p>11.2 Inspired and expired air</p> <p>11.3 Aerobic and Anaerobic respiration</p> <p>11.4 Breathing rate and exercise</p>
<p>UNIT-12</p> <p>Coordination and response</p>	<p>12.1 The human nervous system</p> <p>12.2 Reflex arc</p> <p>12.3 Hormones</p> <p>12.4 Coordination in plants</p>

UNIT-13 Excretion and homeostasis	13.1 Excretion & Human excretory system 13.2 Homeostasis 13.3 Structure of skin
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YEAR 2

<u>TOPIC/UNIT</u>	<u>CONTENT</u>
UNIT-14 Reproduction in plants	14.1 Asexual mode of reproduction 14.2 Sexual mode of reproduction 14.3 Pollination and fertilization
UNIT-15 Reproduction in humans	15.1 Male reproductive system 15.2 Female reproductive system 15.3 Human gametes and fertilization 15.4 Menstrual cycle 15.5 Placenta and amniotic sac 15.6 Sexually transmitted infections
UNIT-16 Chromosomes, genes and proteins	16.1 Chromosomes and cell division 16.2 Mitosis 16.3 Meiosis 16.4 Genes and alleles 16.5 Genotype and phenotype 16.6 Codominance and pedigree diagrams
UNIT-17 Variation and selection	17.1 Continuous and Discontinuous variation 17.2 Natural selection 17.3 Selective breeding

UNIT-18 Organisms and environment	18.1 Energy flow and food webs 18.2 Energy losses and trophic levels 18.3 Nutrient cycles
UNIT-19 Human influences on environment	19.1 Human pressures on ecosystem 19.2 Eutrophication 19.3 Conservation of forests
UNIT-20 Biotechnology and genetic modification	20.1 Using microorganisms for biotechnology 20.2 Making use of enzymes 20.3 Genetic modification

SUBJECT – MATHEMATICS

YEAR 2

<u>TOPIC/UNIT</u>	<u>CONTENT</u>
<u>UNIT-1</u> Managing money Ratio, rate and proportion	Earning money Borrowing and investing money Buying and selling Working with ratio Ratio and scale Rates Kinematic graphs Proportion Direct and inverse proportion in algebraic terms
<u>UNIT-2</u> Further solving of equations and inequalities	Simultaneous linear equations Linear inequalities Regions in a plane Completing the square

<p>More equations, formulae and functions</p>	<p>Quadratic formula Factorising quadratics where the coefficient of x^2 is not 1 Algebraic fractions</p> <p>Setting up equations to solve problems Using and rearranging formulae Functions and function notation</p>
<p><u>UNIT-3</u> Curved graphs</p>	<p>Review of quadratic graphs (the parabola) Drawing reciprocal graphs (the hyperbola) Using graphs to solve quadratic equations Simultaneous linear and non-linear equations Other non-linear graphs Finding the gradient of a curve Derivatives of functions</p>
<p><u>UNIT-4</u> Symmetry</p>	<p>Symmetry in two dimensions Symmetry in three dimensions Symmetry properties of circles Angle relationships in circles</p>
<p><u>UNIT-5</u> Scale drawings, bearings and trigonometry</p>	<p>Scale drawings Bearings Understanding the tangent, cosine and sine ratios Exact trigonometric ratios Solving problems using trigonometry Sines, cosines and tangents of angles greater than 90° The sine and cosine rules Area of a triangle Trigonometry in three dimensions</p>
<p><u>UNIT-6</u> Transformations and vectors</p>	<p>Simple plane transformations Further transformations Vectors</p>
<p><u>UNIT-7</u> Probability using tree diagrams and Venn diagrams</p>	<p>Using tree diagrams to show outcomes Calculating probability from tree diagrams Calculating probability from Venn diagrams Conditional probability</p>

SUBJECT – INFORMATION AND COMMUNICATION TECHNOLOGY

YEAR 1

<u>TOPIC/UNIT</u>	<u>CONTENT</u>
Types and components of computer systems	<ul style="list-style-type: none">● Hardware and software● Main components of a computer system● Operating systems● Types of computers● Impact of emerging technologies
Presentations	<ul style="list-style-type: none">● What is presentation● Open a source file● Use a master slide to place objects● Create presentation slides● Display a presentation
Input and Output devices Storage devices and media	<ul style="list-style-type: none">● Input devices and their uses● Direct data entry devices● Output devices and their uses● Backing up of data● Types of access● Secondary storage media
File management Images Layout	<ul style="list-style-type: none">● What is generic file type?● Manage files effectively● Reduce file sizes for storage or transmission● Software tools● Edit an image● Basic documents● Place objects into a document
Networks and the effects of using them	<ul style="list-style-type: none">● Networks● Network issues and communication

Styles Proofing	<ul style="list-style-type: none"> ● Corporate house styles ● Create styles in a document ● Software tools ● Proofing
Graphs and charts Document Production	<ul style="list-style-type: none"> ● Chart types ● Create a chart ● Label a chart ● Use secondary axes ● Format text and organize page layout ● Edit a table
Data Manipulation	<ul style="list-style-type: none"> ● Create a database structure ● Manipulate data ● Present data

YEAR 2

Website Authoring	<ul style="list-style-type: none"> ● Web development layers ● Create a web page ● Use stylesheets ● Test and publish a website
The effects of using ICT	<ul style="list-style-type: none"> ● The effects of ICT on employment ● The effects of ICT on working patterns ● Microprocessor-controlled devices in the home ● Potential health ● problems related to the prolonged use of ICT equipment
ICT Applications	<ul style="list-style-type: none"> ● Communication application ● Data handling applications ● Measurement applications ● Microprocessors in control applications ● Modelling applications ● Manufacturing applications ● School management systems

	<ul style="list-style-type: none"> ● Booking systems ● Banking applications ● Expert systems ● Computers in medicine ● Computers in the retail industry ● Recognition systems ● Monitoring and tracking systems ● Satellite systems
Data Analysis	<ul style="list-style-type: none"> ● What is a data model? ● Create a data model ● Test the data model ● Manipulate data ● Present data ●
Systems life Cycle	<ul style="list-style-type: none"> ● Analysis ● Design ● Development and testing ● Implementation ● Documentation ● Evaluation
Safety and Security Audiences Communication	<ul style="list-style-type: none"> ● Physical security ● E- safety ● Security of data <ul style="list-style-type: none"> ● Additional security of data online ● Audiences' appreciation ● Legal, moral, ethical and cultural appreciation ● Communication with other ICT users using email ● Effective use of the internet

SUBJECT – COMPUTER SCIENCE

Year 1

<u>TOPIC/UNIT</u>	<u>CONTENT</u>
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Data Representation	<ul style="list-style-type: none"> ● Number Systems ● Text, sound and images ● Data storage and file compression ● Exam styled questions
Data transmission	<ul style="list-style-type: none"> ● Types and methods of data transmission ● Methods of error detection ● Symmetric and asymmetric encryption
Boolean logic	<ul style="list-style-type: none"> ● Standard logic gate symbols ● The function of the six logic gates ● Logic circuits, logic expressions, truth tables and problem statements ● Exam style Questions
Hardware	<ul style="list-style-type: none"> ● Computer architecture ● Input and output devices ● Data storage ● Network hardware ● Exam style questions
Algorithm design and problem solving	<ul style="list-style-type: none"> ● The program development life cycle ● Computer system, sub- systems and decomposition ● Explaining the purpose of an algorithm ● Standard methods of solution ● Validation and verification ● Test data ● Trace tables to document dry runs of algorithm ● Identifying errors in algorithms ● Writing and amending algorithm
Programming	<ul style="list-style-type: none"> ● Programming concepts ● Arrays ● File handling
Software	<ul style="list-style-type: none"> ● Types of software and interrupts ● Types of programming language, translators and integrated development environments

YEAR 2

<u>TOPIC/UNIT</u>	<u>CONTENT</u>
The internet and its uses	<ul style="list-style-type: none">● The internet and the World Wide Web● Digital currency● Cyber security
Databases	<ul style="list-style-type: none">● Databases
Automated and emerging technologies	<ul style="list-style-type: none">● Automated systems● Robotics● Artificial Intelligence

SUBJECT – ART AND DESIGN

YEAR 1 AND 2

<u>TOPIC/UNIT</u>	<u>CONTENT</u>
Elements of Art	Introducing the basic building blocks of visual art, including line, shape, form, color, texture, space, and value.
Principal of Design	Explaining fundamental principles that govern the organization of visual elements in art, such as balance, contrast, emphasis, movement, pattern, rhythm, and unity.
Drawing Fundamentals	Teaching foundational drawing skills, including observation, contour drawing, gesture drawing, and basic perspective.

foreshortening and how it affects the appearance of body parts when viewed from different angles or perspectives.

SUBJECT – BUSINESS STUDIES

YEAR 1 AND 2

<u>TOPIC/UNIT</u>	<u>CONTENT</u>
UNIT-1 Understanding business activity	<p>Business Activity The purpose and nature of business activity:</p> <ul style="list-style-type: none"> • Concepts of needs, wants, scarcity and opportunity cost • Importance of specialization • Purpose of business activity • The concept of adding value and how added value can be increased <p>Classification of business Economic sectors in terms of primary, secondary and tertiary sectors:</p> <ul style="list-style-type: none"> • Basis of business classification, using examples to illustrate the classification • Reasons for the changing importance of business classification, e.g. in developed and developing economies <p>Classify business enterprises between private sector and public sector in a mixed economy</p> <p>Differences in the objectives of private sector and public sector enterprises</p> <p>Business objectives and Stakeholder objectives Businesses can have several objectives and the importance of them can change:</p> <ul style="list-style-type: none"> • Need for business objectives and the importance of them • Different business objectives, e.g. survival, growth, profit and market share • Objectives of social enterprises <p>The role of stakeholder groups involved in business activity:</p> <ul style="list-style-type: none"> • Main internal and external stakeholder groups • Objectives of different stakeholder groups • How these objectives might conflict with each other, use examples <p>Enterprise, Business and growth Enterprise and entrepreneurship:</p> <ul style="list-style-type: none"> • Characteristics of successful entrepreneurs • Contents of a business plan and how business plans assist entrepreneurs

	<ul style="list-style-type: none"> • Why and how governments support business start-ups, e.g. grants, training schemes. <p>The methods and problems of measuring business size:</p> <ul style="list-style-type: none"> • Methods of measuring business size, e.g. number of people employed, value of output, capital employed (profit is not a method of measuring business size) • Limitations of methods of measuring business size. <p>Why some businesses grow and others remain small:</p> <ul style="list-style-type: none"> • Why the owners of a business may want to expand the business • Different ways in which businesses can grow, e.g. internal/external • Problems linked to business growth and how these might be overcome • Why some businesses remain small <p>Why some (new or established) businesses fail:</p> <ul style="list-style-type: none"> • Causes of business failure, e.g. lack of management skills, changes in the business environment, liquidity problems • Why new businesses are at a greater risk of failing. <p>Types of business organisations</p> <p>The main features of different forms of business organisation:</p> <ul style="list-style-type: none"> • Sole traders, partnerships, private and public limited companies, franchises and joint ventures • Differences between unincorporated businesses and limited companies • Concepts of risk, ownership and limited liability • Recommend and justify a suitable form of business organisation to owner's/management in a given situation <ul style="list-style-type: none"> • Business organizations in the public sector, e.g. public corporations
<p>UNIT-2 People in business</p>	<p>Motivating employees</p> <p>The importance of a well-motivated workforce:</p> <ul style="list-style-type: none"> • Why people work and what motivation means • The benefits of a well-motivated workforce: labour productivity, reduced absenteeism and labour turnover • The concept of human needs, e.g. Maslow's hierarchy • Key motivational theories: Taylor and Herzberg <p>Methods of motivation:</p> <ul style="list-style-type: none"> • Financial rewards, e.g. wage, salary, bonus, commission and profit sharing • Non-financial methods, e.g. job enrichment, job rotation, team working, training, opportunities for promotion • Recommend and justify appropriate method(s) of motivation in given circumstances <p>Organisation and management</p> <p>Draw, interpret and understand simple organisational charts:</p> <ul style="list-style-type: none"> • Simple hierarchical structures: levels of hierarchy, span of control, chain of command e.g. tall/short

- Roles and responsibilities of directors, managers, supervisors, other employees in an organisation and inter-relationships between them

The role of management:

- Functions of management, e.g. planning, organising, coordinating, commanding and controlling
- Importance of delegation; trust versus control

Leadership styles:

- Features of the main leadership styles, e.g. autocratic, democratic and laissez-faire
- Recommend and justify an appropriate leadership style in given circumstances

Trade unions:

- What a trade union is and the effects of employees being union members

Recruitment, selection and training of employees

Recruitment and selecting employees:

- Recruitment and selection methods
- Difference between internal recruitment and external recruitment
- Main stages in recruitment and selection of employees
- Recommend and justify who to employ in given circumstances
- Benefits and limitations of part-time employees and full-time employees

The importance of training and the methods of training:

- Importance of training to a business and to employees
- Benefits and limitations of induction training, on-the-job training and off-the-job training

Why reducing the size of the workforce might be necessary?

- Difference between dismissal and redundancy with examples
- Understand situations in which downsizing the workforce might be necessary, e.g. automation or reduced demand for products
- Recommend and justify which employees to make redundant in given circumstances

Legal controls over employment issues and their impact on employers and employees:

- Legal controls over employment contracts, unfair dismissal, discrimination, health and safety, legal minimum wage

Internal and external communication

Why effective communication is important and the methods used to achieve it:

- Effective communication and its importance to business
- Benefits and limitations of different communication methods including those based on information technology (IT)

	<ul style="list-style-type: none"> • Recommend and justify which communication method to use in given circumstances <p>Demonstrate an awareness of communication barriers:</p> <ul style="list-style-type: none"> • How communication barriers arise and problems of ineffective communication; how communication barriers can be reduced or removed
<p>UNIT-3 Marketing</p>	<p>Marketing, competition and the customer</p> <p>The role of marketing:</p> <ul style="list-style-type: none"> • Identifying customer needs • Satisfying customer needs • Maintaining customer loyalty • Building customer relationships <p>Market changes:</p> <ul style="list-style-type: none"> • Why customer/consumer spending patterns may change • The importance of changing customer needs • Why some markets have become more competitive • How businesses can respond to changing spending patterns and increased competition <p>Concepts of niche marketing and mass marketing:</p> <ul style="list-style-type: none"> • Benefits and limitations of both approaches to marketing <p>How and why market segmentation is undertaken:</p> <ul style="list-style-type: none"> • How markets can be segmented, e.g. according to age, socio-economic grouping, location, gender • Potential benefits of segmentation to business • Recommend and justify an appropriate method of segmentation in given circumstances <p>Market research</p> <p>The role of market research and methods used:</p> <ul style="list-style-type: none"> • Market-orientated businesses (uses of market research information to a business) • Primary research and secondary research (benefits and limitations of each) • Methods of primary research, e.g. postal questionnaire, online survey, interviews, focus groups • The need for sampling • Methods of secondary research, e.g. online, accessing government sources, paying for commercial market research reports • Factors influencing the accuracy of market research data <p>Presentation and use of market research results:</p> <ul style="list-style-type: none"> • Analyse market research data shown in the form of graphs, charts and diagrams; draw simple conclusions from such data <p>Marketing mix</p> <p>Product:</p> <ul style="list-style-type: none"> • The limitations and benefits of developing new products • Brand image; impact on sales and customer loyalty

- The role of packaging
- The product life cycle: main stages and extension strategies; draw and interpret a product life cycle diagram
- How stages of the product life cycle can influence marketing decisions, e.g. promotion and pricing decisions

Price

- Pricing methods (benefits and limitations of different methods), e.g. cost plus, competitive, penetration, skimming, and promotional
- Recommend and justify an appropriate pricing method in given circumstances
- Understand the significance of price elasticity: difference between price elastic demand and price inelastic demand; importance of the concept in pricing decisions (knowledge of the formula and calculations of PED will not be assessed)

Place – distribution channels:

- Advantages and disadvantages of different channels, e.g. use of wholesalers, retailers or direct to consumers
- Recommend and justify an appropriate distribution channel in given circumstances

Promotion

- The aims of promotion
- Different forms of promotion and how they influence sales, e.g. advertising, sales promotion
- The need for cost-effectiveness in spending the marketing budget on promotion

Technology and the marketing mix:

- Define and explain the concept of e-commerce
- The opportunities and threats of e-commerce to business and consumers
- Use of the internet and social media networks for promotion

Marketing strategy

Justify marketing strategies appropriate to a given situation:

- Importance of different elements of the marketing mix in influencing consumer decisions in given circumstances
- Recommend and justify an appropriate marketing strategy in given circumstances

The nature and impact of legal controls related to marketing:

- Impact of legal controls on marketing strategy, e.g. misleading promotion, faulty and dangerous goods

The opportunities and problems of entering new foreign markets:

- Growth potential of new markets in other countries
- Problems of entering foreign markets, e.g. cultural differences and lack of knowledge

	<ul style="list-style-type: none"> • Benefits and limitations of methods to overcome such problems, e.g. joint ventures, licensing
<p>UNIT-4 Operations Management</p>	<p>Production of goods and services The meaning of production:</p> <ul style="list-style-type: none"> • Managing resources effectively to produce goods and services • Difference between production and productivity • Benefits of increasing efficiency and how to increase it, e.g. increasing productivity by automation and technology, improved labour skills • Why businesses hold inventories • The concept of lean production: how to achieve it, e.g. just-in-time inventory control and Kaizen; benefits of lean production <p>The main methods of production:</p> <ul style="list-style-type: none"> • Features, benefits and limitations of job, batch and flow production • Recommend and justify an appropriate production method for a given situation <p>How technology has changed and is changing production methods, e.g. using computers in design and manufacturing</p> <p>Costs, scale of production and break-even analysis Identify and classify costs: • Classifying costs using examples, e.g. fixed, variable, average, total</p> <ul style="list-style-type: none"> • Use cost data to help make simple cost-based decisions, e.g. to stop production or continue <p>Economies and diseconomies of scale: • The concept of economies of scale with examples, e.g. purchasing, marketing, financial, managerial, technical</p> <ul style="list-style-type: none"> • The concept of diseconomies of scale with examples, e.g. poor communication, lack of commitment from employees, weak Coordination <p>Break-even analysis:</p> <ul style="list-style-type: none"> • The concept of break-even • Construct, complete or amend a simple break-even chart • Interpret a given chart and use it to analyse a situation • Calculate break-even output from given data • Define, calculate and interpret the margin of safety • Use break-even analysis to help make simple decisions, e.g. impact of higher price • Understand the limitations of break-even analysis <p>Achieving quality production Why quality is important and how quality production might be achieved:</p> <ul style="list-style-type: none"> • What quality means and why it is important for all businesses • The concept of quality control and how businesses implement quality control • The concept of quality assurance and how this can be implemented <p>Location decisions</p>

	<p>The main factors influencing the location and relocation decisions of a business:</p> <ul style="list-style-type: none"> • Factors relevant to the location decision of manufacturing businesses and service businesses • Factors that a business could consider when deciding which country to locate operations in • The role of legal controls on location decisions • Recommend and justify an appropriate location for a business in given circumstances
<p>UNIT-5 External influences on business activity</p>	<p>Economic issues Business cycle:</p> <ul style="list-style-type: none"> • Main stages of the business cycle, e.g. growth, boom, recession, slump • Impact on businesses of changes in employment levels, inflation and Gross Domestic Product (GDP) <p>How government control over the economy affects business activity and how businesses may respond:</p> <ul style="list-style-type: none"> • Identify government economic objectives, e.g. increasing Gross Domestic Product (GDP) • Impact of changes in taxes and government spending • Impact of changes in interest rates • How businesses might respond to these changes <p>Environmental and ethical issues Environmental concerns and ethical issues as both opportunities and constraints for businesses:</p> <ul style="list-style-type: none"> • How business activity can impact on the environment, e.g. global warming • The concept of externalities: possible external costs and external benefits of business decisions • Sustainable development; how business activity can contribute to this • How and why business might respond to environmental pressures and opportunities, e.g. pressure groups • The role of legal controls over business activity affecting the environment, e.g. pollution controls • Ethical issues a business might face: conflicts between profits and ethics • <p>How business might react and respond to ethical issues, e.g. child labour, paying fair prices to suppliers</p> <p>Business and the international economy The importance of globalisation:</p> <ul style="list-style-type: none"> • The concept of globalisation and the reasons for it • Opportunities and threats of globalisation for businesses • Why governments might introduce import tariffs and import quotas <p>Reasons for the importance and growth of multinational companies (MNCs):</p> <ul style="list-style-type: none"> • Benefits to a business of becoming a multinational and the impact on its stakeholders

	<ul style="list-style-type: none"> • Potential benefits to a country and/or economy where a MNC is located, e.g. jobs, exports, increased choice, investment • Potential drawbacks to a country and/or economy where a MNC is located, e.g. reduced sales of local businesses, repatriation of profits <p>The impact of exchange rate changes:</p> <ul style="list-style-type: none"> • Depreciation and appreciation of an exchange rate • How exchange rate changes can affect businesses as importers and exporters of products, e.g. prices, competitiveness, profitability (exchange rate calculations will not be assessed)
<p>UNIT-6 Financial information and decisions</p>	<p>Business finance: needs and sources The need for business finance:</p> <ul style="list-style-type: none"> • The main reasons why businesses need finance, e.g. start-up capital, capital for expansion and additional working capital • Understand the difference between short-term and long-term finance needs <p>The main sources of finance:</p> <ul style="list-style-type: none"> • Internal sources and external sources with examples • Short-term and long-term sources with examples, e.g. overdraft for short-term finance and debt or equity for long-term finance • Importance of alternative sources of capital, e.g. micro-finance, crowd-funding • The main factors considered in making the financial choice, e.g. size and legal form of business, amount required, length of time, existing loans • Recommend and justify appropriate source(s) of finance in given circumstances <p>Cash-flow forecasting and working capital The importance of cash and of cash-flow forecasting:</p> <ul style="list-style-type: none"> • Why cash is important to a business • What a cash-flow forecast is, how a simple one is constructed and the importance of it • Amend or complete a simple cash-flow forecast • How to interpret a simple cash-flow forecast • How a short-term cash-flow problem might be overcome, e.g. overdraft, delaying supplier payments, asking debtors to pay more quickly <p>Working capital:</p> <ul style="list-style-type: none"> • The concept and importance of working capital <p>Income statements What profit is and why it is important:</p> <ul style="list-style-type: none"> • How a profit is made • Importance of profit to private sector businesses, e.g. reward for risk-taking/enterprise, source of finance • Difference between profit and cash <p>Income statements:</p>

	<ul style="list-style-type: none"> • Main features of an income statement, e.g. revenue, cost of sales, gross profit, profit and retained profit • Use simple income statements in decision making based on profit calculations (constructing income statements will not be assessed) <p>Statement of financial position The main elements of a statement of financial position:</p> <ul style="list-style-type: none"> • The main classifications of assets and liabilities, using examples <p>Interpret a simple statement of financial position and make deductions from it, e.g. how a business is financing its activities and what assets it owns, sale of inventories to raise finance (constructing statements of financial position will not be assessed)</p> <p>Analysis of accounts Profitability:</p> <ul style="list-style-type: none"> • The concept and importance of profitability <p>Liquidity:</p> <ul style="list-style-type: none"> • The concept and importance of liquidity <p>How to interpret the financial performance of a business by calculating and analysing profitability ratios and liquidity ratios?</p> <ul style="list-style-type: none"> • Gross profit margin • Profit margin • Return on Capital Employed • Current ratio • Acid test ratio <p>Why and how accounts are used:</p> <ul style="list-style-type: none"> • Needs of different users of accounts and ratio analysis • How users of accounts and ratio results might use information to help make decisions, e.g. whether to lend to or invest in the business
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SUBJECT – WELL BEING

YEAR 1

<u>TOPIC/UNIT</u>	<u>CONTENT</u>
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Introduction to Wellbeing	<ul style="list-style-type: none"> ● Introduction ● Mechanisms of wellbeing
Understanding myself	<ul style="list-style-type: none"> ● Recognizing emotions ● Coping with emotions ● Healthy lifestyle ● Impact of Physical activity on health
Introduction to Profile building	<ul style="list-style-type: none"> ● Meaning of Profile building ● Significance of profile building in academic journey
My relationships	<ul style="list-style-type: none"> ● Concept of Peer pressure ● Handling peer pressure
Navigating my world	<ul style="list-style-type: none"> ● Significance of Personal safety ● Practicing Netiquette in online communication
Exploring Career Goals	<ul style="list-style-type: none"> ● Introduction to career goals ● Framing suitable career goals
Navigating my world	<ul style="list-style-type: none"> ● Coping with positive vs. negative changes in life ● Impact of handling positive vs. negatives changes in life
Examination Stress	<ul style="list-style-type: none"> ● Aspects of Examination Stress ● Managing Examination Stress

YEAR 2

Introduction to Wellbeing	<ul style="list-style-type: none"> ● Introduction ● Facets of wellbeing
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Understanding myself	<ul style="list-style-type: none"> ● Understanding emotions ● Coping styles
Understanding myself	<ul style="list-style-type: none"> ● Practising Healthy lifestyle ● Impact of Screen time on health
Significance of Profile building	<ul style="list-style-type: none"> ● Understanding the significant aspects of profile building ● Creating a suitable career profile
Time-management	<ul style="list-style-type: none"> ● Importance of time-management in academic journey ● Techniques for Managing time
Navigating my world	<ul style="list-style-type: none"> ● Significance of Personal safety ● Practising Netiquette in online communication
My relationships	<ul style="list-style-type: none"> ● Notion of Peer pressure ● Coping with peer pressure
Exploring Career Path	<ul style="list-style-type: none"> ● Planning of suitable subject options ● Navigating career path & exploring prospective courses

*If any subject is not listed, we will provide the information for it by next week.