

Zhenghua Secondary School

Sec 4 Express/5 Normal (Academic) Syllabus Coverage for Mid-Year Examination 2022

ENGLISH LANGUAGE 1128

S/N	Topics	Format / Weightings
1	Paper 1: Writing Section A: Editing Section B: Situational Writing Section C: Continuous Writing <i>Duration of Examination = 1hr 50mins</i>	 10 marks 30 marks 30 marks Total = 70 marks (35%)
2	Paper 2: Comprehension Section A: Visual Text – structured questions Section B: Narrative Text – structured questions Section C: Non-narrative Text – structured questions and summary <i>Duration of Examination = 1hr 50mins</i>	 5 marks 20 marks 25 marks Total = 50 marks (35%)
3	Paper 3: Listening Section A: Multiple Choice Questions, Matching and Fill-in-the-blanks Section B: Structured questions <i>Duration of Examination = approximately 50mins</i>	 24 marks 6 marks Total = 30 marks (10%)
4	Paper 4: Oral Communication The two parts in this paper are thematically linked. Part 1: Reading Aloud <i>Candidates read aloud a short text.</i> Part 2: Spoken Interaction <i>Candidates engage in a discussion with the examiners on a topic based on a visual stimulus</i> <i>Duration of Examination = About 20 minutes (including 10 minutes of preparation time)</i>	 10 marks 20 marks Total = 30 marks (20%)

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CHINESE LANGUAGE (1160) 快捷华文

	测试	项目	必答题数	分数	分数比例	附注
1	试卷（一） 2 小时	作文 <ul style="list-style-type: none"> 情境作文 论说文 材料作文 	1	40		三选一
		实用文 <ul style="list-style-type: none"> 私人电邮 公务电邮 	1	20		二选一
		总		60	30%	
2	试卷（二） 1 小时 30 分钟	综合填空	10	10		
		阅读理解（一） <ul style="list-style-type: none"> 理解测验 	10	20		
		阅读理解（二） <ul style="list-style-type: none"> 理解问答题 	10	40		
		总		70	35%	
3	试卷（三）	听力考试 <ul style="list-style-type: none"> 选择题 	10	20		
		口试 <ul style="list-style-type: none"> 朗读短文 看录像短片对话 		10 40		
		总		70	35%	
	总分			200	100%	

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HIGHER CHINESE LANGUAGE (1116) 高级华文

	测试	项目	必答 题数	分 数	分数比 例 %	附注
1	试卷（一） 2 小时	作文 <ul style="list-style-type: none"> 情境作文 演讲词 新闻看法 	1	60		三选一
		实用文 <ul style="list-style-type: none"> 私人电邮 - 话题讨论，提供意见 发表言论 	1	20		二选一
		总		80	40%	
2	试卷（二） 1 小时 45 分钟	短文填充	5	10		
		病句改正	5	10		
		阅读理解一（3 题选择题和 2 题简短问答题）	5	10		技能考查参照课本单元学习单
		阅读理解二（问答题）	9	38		技能考查参照课本单元学习单
		片段缩写	1	12		
		总		80	40%	
3	口试	会话 - 看录像短片进行口头报告 + 讨论		40	20%	
		总分		200	100%	

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MALAY LANGUAGE 1148

Kertas	Komponen	Markah / Timbangan	Catatan
1	Bahagian A: E-mel Calon dikehendaki menjawab satu soalan daripada: a) E-mel tidak formal b) E-mel formal	20	Kamus Dewan boleh digunakan Masa peperiksaan: 2 jam
	Bahagian B: Karangan Calon dikehendaki menjawab satu soalan daripada karangan jenis: a) Deskriptif/Naratif b) Ekspositori c) Naratif	40	
	Jumlah	60 (30%)	
2	Bahagian A1: Imbuhan	10	Kamus tidak boleh digunakan. Masa peperiksaan: 1 jam 30 minit
	Bahagian A2: Peribahasa	10	
	Bahagian A3: Melengkapkan Teks	10	
	Bahagian B: Grafik Stimulus	10	
	Bahagian C: Kefahaman	30	
	Jumlah	70 (35%)	
3	Lisan		Masa peperiksaan: 30 minit
	Bahagian A: Bacaan Lantang	10	
	Bahagian B: Perbualan Berdasarkan video	40	
	Kefahaman Mendengar	20	
	Jumlah	70 (35%)	

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PHYSICS 6091

Duration of Examination: Paper 1: 1 hour

Paper 2: 1 hour 45 minutes

Paper 3: 1 hour 50 minutes

S/N	Topics	Format/ Weightings
1	Physical Units and Measurements	<u>Paper 1</u> (40 marks) Multiple Choice Questions
2	Kinematics	
3	Forces	
4	Mass Weight and Density	<u>Paper 2</u> <u>Section A (50 marks)</u> Structured Questions) <u>Section B (30 marks)</u> Free Response Questions
5	Turning effects of Forces	
6	Energy, Work and Power	
7	Pressure	
8	Temperature	
9	Kinetic Model of Matter	<u>Paper 3</u> Practical Assessment Section A (20 marks) Section B (20 marks) Total: 160 marks
10	Transfer of Thermal Energy	
11	Thermal Properties of Matter	
12	Light	
13	Waves	
14	Electromagnetic Waves	
15	Sound	
16	Static Electricity	
17	Current Electricity	
18	D.C. Circuits	
19	Practical Electricity	

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CHEMISTRY 6092

Duration of Examination: Paper 1: 1 hour

Paper 2: 1 hour 45 minutes

Paper 3: 1 hour 50 minutes

Chapter	Topics	Format/ Weightings
1	Kinetic Particle Theory	<u>Paper 1</u> (40 marks) Multiple Choice Questions
2	Measurement and Experimental Techniques	
3	Separation and Purification	<u>Paper 2</u> <u>Section A (50 marks)</u> Structured Questions) <u>Section B (30 marks)</u> Free Response Questions
4	Elements, Compounds and Mixtures	
5	Atomic Structure	
6	Ionic Bonding	
7	Covalent and Metallic Bonding	
8	Writing Chemical Equations	
9	The Mole	
10	Chemical Calculations	
11	Acids and Bases	<u>Paper 3</u> (40 marks) Practical Assessment
12	Salts	
13	Oxidation and Reduction	Total: 160 marks
14	Metals	
15	Electrolysis	
16	The Periodic Table	
17	Energy Changes	
18	Speed of Reaction	
19	Ammonia	
20	The Atmosphere and Environment	
21	An Introduction to Organic Chemistry	
22	Alkanes	
23	Alkenes	

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BIOLOGY 6093

Duration of Examination: Paper 1: 1 hour

Paper 2: 1 hour 45 minutes

Paper 3: 1 hour 50 minutes

S/N	Topics	Format/ Weightings
1	Cells	<u>Paper 1</u> (40 marks) Multiple Choice Questions
2	Movement of Substances	
3	Nutrients	<u>Paper 2</u> <u>Section A (50 marks)</u> Structured Questions <u>Section B (30 marks)</u> Free Response Questions
4	Enzymes	
5	Nutrition in Humans	
6	Nutrition in Plants	
7	Transport in Humans	
8	Transport in Plants	<u>Paper 3</u> (40 marks) Practical Assessment
9	Respiration in Humans	
10	Excretion in Humans	Total: 160 marks
11	Homeostasis	
12	The Nervous System	
13	The Human Eye	
14	Hormones	
15	Cell Division	
16	Reproduction in Plants	
17	Reproduction in Humans	
18	Heredity	
19	Molecular Genetics	

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SCIENCE (Physics, Chemistry) 5076

Duration of Examination: Paper 1: 1 hour

Paper 2/3: 1 hour 15 minutes

S/N	Topics	Format/ Weightings
<u>Physics</u>		<p><u>Paper 1 (40 marks)</u> Multiple Choice Questions Q1 to Q20 – Physics Q21 to Q40 – Chemistry</p> <p><u>Paper 2 (Physics)</u> <u>Section A (45 marks)</u> Structured Questions</p> <p><u>Section B (20 marks)</u> Free Response Questions Choose 2 out of 3 questions [note: Only the first two questions are assessed if all 3 questions are attempted]</p>
1	Measurement	
2	Kinematics	
3	Forces and Pressure	
4	Mass Weight and Density	
5	Turning effects of Forces	
6	Energy, Work and Power	
7	Kinetic Model of Matter	
8	Transfer of Thermal Energy	
9	Thermal Properties of Matter	
10	Light	
11	Waves	
12	Electromagnetic Waves	
13	Sound	
14	Static Electricity	
15	Current Electricity	
16	D.C. circuits	
<u>Chemistry</u>		<p><u>Paper 3 (Chemistry)</u> <u>Section A (45 marks)</u> Structured Questions</p> <p><u>Section B (20 marks)</u> Free Response Questions Choose 2 out of 3 questions [note: Only the first two questions are assessed if all 3 questions are attempted]</p> <p><u>Paper 5 (Practical) (30 marks)</u> Q1. Physics Practical Q2. Chemistry Practical</p> <p>Total: 200 marks</p>
1	Kinetic Particle Theory	
2	Measurement and Experimental Techniques	
3	Separation and Purification	
4	Elements, Compounds and Mixtures	
5	Atomic Structure	
6	Chemical Bonding	
7	Writing Chemical Equations	
8	The Mole	
9	Chemical Calculations	
10	Acids and Bases	
11	Salts	
12	Oxidation and Reduction	
13	Metals	
14	The Periodic Table	
15	Energy Changes	

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SCIENCE (Chemistry, Biology) 5078

Duration of Examination: Paper 1: 1 hour

Paper 3/4: 1 hour 15 minutes

S/N	Topics	Format/ Weightings
<u>Chemistry</u>		<p>Paper 1 (40 marks) Multiple Choice Questions Q1 to Q20 – Chemistry Q21 to Q40 – Biology</p> <p><u>Paper 3 (Chemistry)</u> <u>Section A (45 marks)</u> Structured Questions</p> <p><u>Section B (20 marks)</u> Free Response Questions Choose 2 out of 3 questions [note: Only the first two questions are assessed if all 3 questions are attempted]</p>
1	Kinetic Particle Theory	
2	Measurement and Experimental Techniques	
3	Separation and Purification	
4	Elements, Compounds and Mixtures	
5	Atomic Structure	
6	Chemical Bonding	
7	Writing Chemical Equations	
8	The Mole	
9	Chemical Calculations	
10	Acids and Bases	
11	Salts	
12	Oxidation and Reduction	
13	Metals	
14	The Periodic Table	
15	Energy Changes	
<u>Biology</u>		<p><u>Paper 4 (Biology)</u> <u>Section A (45 marks)</u> Structured Questions</p> <p><u>Section B (20 marks)</u> Free Response Questions Choose 2 out of 3 questions [note: Only the first two questions are assessed if all 3 questions are attempted]</p> <p><u>Paper 5 (Practical) (30 marks)</u> Q1. Chemistry Practical Q2. Biology Practical</p> <p>Total: 200 marks</p>
1	Cells	
2	Movement of Substances	
3	Nutrients	
4	Enzymes	
5	Nutrition in Humans	
6	Nutrition in Plants	
7	Transport in Plants	
8	Transport in Humans	
9	Respiration in Humans	
10	The Nervous System	
11	The Human Eye	
12	Hormones	
13	Reproduction in Plants	
14	Reproduction in Humans	
15	Heredity	
16	Molecular Genetics	

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MATHEMATICS 4048

Duration of Examination: 2 hours (Paper 1) & 2 hours and 30 minutes (Paper 2)

Syllabus has been completed. All Sec 1 to Final Year topics are tested.

S/N	Topics	Format / Weightings
Unit 1	Numbers and Algebra	Paper 1: 80 marks (50%) 2hr Calculators Allowed
	1.1 Numbers and their Operations	
	1.2 Ratio and Proportion	
	1.3 Percentage	
	1.4 Rate and Speed	
	1.5 Algebraic Expressions and Formulae	
	1.6 Functions and Graphs	
	1.7 Equations and Inequalities	
	1.8 Set Language and Notation	
	1.9 Matrices	
	1.10 Problems in Real-World Contexts	
Unit 2	Geometry and Measurement	Paper 2: 100 marks (50%) 2hr 30min Calculators Allowed
	2.1 Angles, Triangles and Polygons	
	2.2 Congruence and Similarity	
	2.3 Properties of Circles	
	2.4 Pythagoras' Theorem and Trigonometry	
	2.5 Mensuration	
	2.6 Coordinate Geometry	
	2.7 Vectors in Two Dimensions	
Unit 3	Statistics and Probability	
	3.1 Data Analysis	
	3.2 Probability	

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ADDITIONAL MATHEMATICS 4049 (Only for Sec 4 Express / 5 Normal (Academics))

Duration of Examination: 2 hours 15 minutes (Paper 1) & 2 hours 15 minutes (Paper 2)

S/N	Topics	Format / Weightings
1	Chapter 1: Quadratic Functions	Paper 1: 90 marks (50%) 2 hours 15 minutes Calculators Allowed
2	Chapter 2: Equations and Inequalities	
3	Chapter 3: Surds	
4	Chapter 4: Polynomials, Cubic Equations and Partial Fractions	
5	Chapter 5: Binomial Theorem & its Applications	
6	Chapter 6: Exponential & Logarithmic Functions	
7	Chapter 7: Coordinate Geometry	
8	Chapter 8: Linear Law	
9	Chapter 9: Trigonometric Functions and Graphs	
10	Chapter 10: Trigonometric Equations and Identities	
11	Chapter 11: Gradients, Derivatives and Differentiation Techniques	Paper 2: 90 marks (50%) 2 hours 15 minutes Calculators Allowed
12	Chapter 12: Applications of Differentiation	
13	Chapter 13: Differentiation of Trigonometric, Exponential and Logarithmic Functions and their Applications	
14	Chapter 14: Integration	
15	Chapter 15: Applications of Integration	
16	Chapter 16: Kinematics	

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HUMANITIES (Social Studies 2272/01 & Geography 2272/02)

Duration of Examination: 1 h 45 min for Social Studies and 1 h 40 min for Geography

S/N	Topics	Format/ Weightings
<u>Social Studies</u>		
1	<u>Issue 3</u> <ul style="list-style-type: none">Chapter 8: What does it mean to live in a globalised world?Chapter 9: How do we respond to tensions arising from Economic Impact of Globalisation?Chapter 10: How do we respond to tensions arising from Cultural Impact of Globalisation?	<u>Section A</u> Source-Based Case Study (35 marks) <u>Section B</u> Structured-Response Questions (15 marks) Total: 50 marks
<u>Geography</u>		
1	<u>Physical Geography</u> <ul style="list-style-type: none">Plate Tectonic (Gateways 1 - 3)Weather & Climate (Gateways 1 & 2) <u>Human Geography</u> <ul style="list-style-type: none">Tourism (Gateways 1 – 3)Food Resource (Gateway 1)	<u>Section A</u> Field Study– Geographical Skills and Investigations (13 marks) <u>Section B</u> Structured Questions (12 marks)
2	Geographical Skills and Investigations <ul style="list-style-type: none">Topic: Tourism onlyGateway 2: Geographical data and techniquesGateway 3: Geographical investigations	<u>Section C</u> Structured Essay Questions (25 marks) Total: 50 marks

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HUMANITIES (Social Studies 2273/01 & History 2273/02)

Duration of Examination: 1h 45 min for Social Studies and 1 h 40 min for History

S/N	Topics	Format/ Weightings
<u>Social Studies</u>		
1	<u>Issue 3</u> <ul style="list-style-type: none">Chapter 8: What does it mean to live in a globalised world?Chapter 9: How do we respond to tensions arising from Economic Impact of Globalisation?Chapter 10: How do we respond to tensions arising from Cultural Impact of Globalisation?	<u>Section A</u> Source-Based Case Study (35 marks) <u>Section B</u> Structured-Response Questions (15 marks) Total: 50 marks
<u>History</u>		
1	<u>Chapters 6 and 7 of Sec 3 textbook</u> <u>Chapters 1, 2 and 3 of Sec 4 textbook</u> <ul style="list-style-type: none">Outbreak of World War II in the Asia Pacific, Defeat of Japan in World War II, Reasons for Cold War in Europe, Korean War, Cuban Missile Crisis	<u>Section A</u> Source-Based Case Study (30 marks) <u>Section B</u> Structured Essay Question (20 marks) Total: 50 marks

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HUMANITIES

(Social Studies 2274/01 & Literature Elective 2274/02)

Duration of Examination: 1 h 45 min for Social Studies and 1 h 40 min for Literature Elective

S/N	Topics	Format/ Weightings
<u>Social Studies</u>		
1	<u>Issue 3</u> <ul style="list-style-type: none"> Chapter 8: What does it mean to live in a globalised world? Chapter 9: How do we respond to tensions arising from Economic Impact of Globalisation? Chapter 10: How do we respond to tensions arising from Cultural Impact of Globalisation? 	<u>Section A</u> Source-Based Case Study (35 marks) <u>Section B</u> Structured-Response Questions (15 marks) Total: 50 marks
<u>Literature</u>		
Paper 1: <u>Fahrenheit 451 Set - Text & Unseen</u>		
	<u>Prose: <i>Fahrenheit 451</i> (4E)</u> <ul style="list-style-type: none"> Plot & Structure Characterisation Themes Setting Style OR <u>Prose: <i>Hook & Eye – 11 short stories</i> (5N)</u> <ul style="list-style-type: none"> Plot & Structure Characterisation Themes Setting Style 	<u>Section A</u> Set-text Questions: Do either an Essay question OR Passage-based essay questions (25 marks)
	<u>Unseen Poetry</u> <ul style="list-style-type: none"> Subject Matter & Mood Theme Diction Figurative Language Rhyme & Rhythm Sound 	<u>Section B</u> Unseen Poetry question (International) OR Unseen Poetry question (Local) (25 marks) Total: 50 marks

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PRINCIPLES OF ACCOUNTS 7087

Duration of Examination: Paper 1: 1 hour; Paper 2: 2 hours

S/N	Topics	Format / Weightings
1	<p>Chapter 1 Introduction to Accounting</p> <p>Chapter 2 The Accounting Information System</p> <p>Chapter 10 Trade receivables</p> <ul style="list-style-type: none">- accounting for impairment loss on trade receivables- Interpreting allowance for impairment of trade receivables <p>Chapter 11 Non-current Assets</p> <ul style="list-style-type: none">- Accounting of Non-current assets- interpreting non-current asset <p>Chapter 13 Long-term borrowings</p> <ul style="list-style-type: none">- Borrowings- Accounting for loan- Presentation of long-term borrowings- Accounting for interest expense- Presentation of interest expense- Interpreting loan and interest expense <p>Chapter 14 Equities</p> <ul style="list-style-type: none">- Owner's equity- Accounting for owner's equity- Interpreting drawings and capital- Shareholders' equity- Accounting for shareholders' equity- interpreting share capital, dividends and retained earnings <p>Chapter 15 Correction of errors</p> <ul style="list-style-type: none">- Errors not revealed by trial balance- Correction of errors- Effects of adjustments	<p><u>Paper 1</u></p> <ul style="list-style-type: none">• 40 marks• Answer all questions in booklet <p><u>Paper 2</u></p> <ul style="list-style-type: none">• 60 marks• Answer all questions• Answer in answer booklet

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DESIGN & TECHNOLOGY 7059

Duration of Examination: 2 hours

S/N	Topics	Format / Weightings
	<u>Theory Paper:</u> Q1. (Design) Project Management Research Needs Definition Idea Generation and Development Evaluation Design Communication Ergonomics and Anthropometry Types of marking out, shaping, joining and assembly processes Q2. Structures Q3. Mechanisms Q4. Electronics	80 marks (40%) Q1 (26 marks) Q2 (18 marks) Q3 (18 marks) Q3 (18 marks)
	Coursework (Journal)	60 marks (60%) Theme based coursework

ART 6123

Duration of Examination: 3 hours

S/N	Topics	Format / Weightings
	Drawing and Painting: Assessment will be based on Preparatory Studies (To be carried out and recorded over 3 weeks) and Final Artwork (To be completed during Art examination for 3 hour). Assessment Criteria: Investigation and Interpretation of Theme (20%) Exploration and Development of Theme (20%) Aesthetic Qualities (20%) Control of Materials and Technical Processes (20%) Personal Response (20%)	100 marks

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NUTRITION & FOOD SCIENCE 6097

Duration of Examination: 2 hours

S/N	Topics	Format / Weightings
1	<u>Theory Paper: Chap 1-16</u> Chapter 1: Proteins Chapter 2: Carbohydrates Chapter 3: Fats Chapter 4: Vitamins Chapter 5: Minerals Chapter 6: Water and Dietary Fibre Chapter 7: Diet and Health Problems Chapter 8: Diet and Meal Planning Chapter 9: Meal Analysis Chapter 10: Sustainable Food Consumption Chapter 11: Preparation and Cooking of Food Chapter 12: Methods of Cooking Chapter 13: Reactions in food during Preparation and Cooking Chapter 14: Sensory Evaluation of Food Chapter 15: Food safety Chapter 16: Convenience Food	100 marks (50%) Section A: 15 m (MCQ) Section B: 55 m Data based structured questions Section C: 30 marks 2 Essay questions
2	Coursework	32m (50%) Problem based coursework