
SYSTEMS OF KNOWLEDGE

Paul Heywood/Peter Serracino Inglott

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1.1 INTRODUCTION

THE University of Malta Matriculation Examination in Systems of Knowledge is obligatory for every candidate seeking admission into the University from 1 October 1989. It is, therefore, necessary for schools preparing students for this examination to provide courses which afford insights into the different disciplines, making the student aware of their strengths and limitations.

The syllabus was drawn up on the assumption that focusing only on the special fields covered by Advanced Level subjects promoted certain habits of mind to the exclusion of others and, if the School was to foster in our students a greater flexibility in adapting to changing patterns of work and life in a post-industrial age, it should afford them opportunities of going beyond the traditional limits of particular disciplines and gaining insight into different systems of knowledge.

The main challenge in translating this concept into a syllabus for teaching and examination lies in offering areas of study which develop the candidates' ability to view ideas, skills and situations from a wider standpoint than that of a single discipline; and, at the same time, delimiting such areas so that formal testing of attainment in them becomes possible and meaningful.

For the exploration of all the six areas of study, guidelines are provided rather than exact prescriptions. What the examiners will be testing is the candidates' ability to grasp, and experiment with, ideas and principles and not simply their capacity for memorizing facts. Nonetheless, real knowledge and preparation in the areas covered by the questions chosen by the candidates is essential if they are to succeed.

This syllabus has been prepared so that the same calibre of work will be expected of candidates taking the examination as of 'A' Level candidates. However the work-load for this syllabus is intended to be half that for 'A'-Level subjects. This is reflected not only in the wide choice of examination questions set but also in the breadth of each question. Thus the candidates are afforded ample scope for showing their grasp of the problems and issues raised.

1.2 Aims

The introduction of Systems of Knowledge is essentially an attempt to broaden the sixth-form curriculum.

It has long been felt that the 'A' Level programme of studies should be supplemented by a cultural course which would not only help break down departmental separatism in schools, born of a concentration of effort on narrow 'A' level syllabuses, but also prompt students to reflect maturely on the specific learning derived from their 'A' level courses and help them relate it to other fields of knowledge within a broad social and cultural framework.

Systems of knowledge is aimed at lending depth and breadth to 'A' level studies, at the same time making students more adaptable, flexible and broadly educated.

It is an attempt to integrate thinking and doing in ways that enlarge rather than trivialize understanding, an effort to recreate the wholeness of the person. Systems of Knowledge militates against an unreflective and mechanistic approach to life.

It also implies a firm belief in the transferability of intellectual skills, like the ability to analyse, to argue logically and persuasively, which are the basis for a successful career.

1.3 Areas of Study

The syllabus comprises six different areas of study:

1.31 Man and Symbols

This unit affords students opportunities to exercise and develop their thinking skills, helping them through role play and simulation exercises to master the guiding principles of discourse, so that they learn to debate, discuss and argue logically and form sound opinions.

Lessons are meant to be enjoyable with an emphasis laid on the concept of *homo ludens*. Francis Bacon likened Logic to athletics when, in the Preface to *Novum Organum* he described it as 'a kind of athletic art to strengthen the sinews of the understanding'.

Teachers are encouraged to foster creative thought by organizing practical sessions in which students try to solve problems together in order to learn, among other things, how the opinion of one speaker may yield a new truth when combined with that of another.

Thinking and communication are means for fitting the mind to derive knowledge in any branch of intellectual endeavour whether it is in the

humanities, the commercial subjects or science. They drill the mind into exactitude.

1.32 Man and Environment

(a) In this unit teacher and students are concerned with RELATIONSHIPS between MAN and his physical/human ENVIRONMENT. These relationships become particularly relevant in the study of spatial patterns involving phenomena on the Earth's surface.

As a result of this broadly-based programme, the Unit 'Man and Environment' brings students into contact with other disciplines in both the Natural and Social Sciences.

(b) It also seeks to make students aware of the relationship of central political concepts to political activity and structures. They may be led to consider how political systems or particular forms of government and politics persist over the years. What holds them together from year to year? Why is it that some of them fall apart while others do not? One of the main avenues of entry to this question has been to account for what is called political stability. Work on political stability tends to focus on political arrangements already in existence and is concerned to show how and why they stay the way they are. Other questions worth probing are how and why such political arrangements come into being and why some countries become democracies while others become dictatorships.

Attempting to give valid answers to these questions entails the adoption of scientific methods of enquiry without which our assumptions and deductions will often prove to be guided by speculative guesses and generalizations. The formulation of concepts backed by statistical data, logical rigour and practical experience will enable the individual to identify what is wrong with a system or what might be the difficulties that have to be overcome.

This unit should also prompt students to participate in the democratic life of their community.

1.33 Man and History

The limitations, both physical and psychological, imposed by living in what is virtually one parish circumscribed by the sea, are apt to breed in our youth a narrow parochialism, what the Italians belittlingly refer to as *campanilismo*. This 'spirit of the belfry' nowhere reveals itself more strikingly than in the essays and other written assignments of sixth-form students. These tasks demand, before all else, a fairly high degree of maturity and mental awareness and not just the study, however thorough, of a few textbooks.

This unit is intended as a contribution to remedying this situation by encouraging students to view the shaping of their nation's destiny down the ages against the background of the cultural forces that have acted and reacted upon one another in the Mediterranean.

Also, this unit seeks to broaden the sixth-form curriculum by being both *complementary* to, and *contrasting* with, the main 'A' Level courses. It seeks to broaden the curriculum within the humanities area for those not studying History and also to offer a useful, stimulating and relevant course for students concentrating on a mathematics/science sixth-form curriculum.

1.34 Set Texts

Most of the books set in this unit are established masterpieces that have become part of our living cultural heritage. Other choices could have been equally appropriate, and will be made in the future. For 1989, two groups of works were selected, developing two great themes: voyages (with their question-raising about the purpose of existence) and the experience of being under judgement (raising the problems of the roots of evil and its punishment).

The classical works – from different ages and cultures – are relevant today because they raise fundamental human issues and the characters portrayed in them have become types embodying eternal yearnings and urges in man.

Every epoch produces its own translations of the classics. The great works are eternally relevant but each generation will interpret them in the light of prevailing ideas – hence different renderings highlighting different facets of the works.

It is for this reason that these masterpieces have been paired up with contemporary or related works. Graham Greene's *Monsignor Quixote* shows how the figure of Don Quixote is still a live vein in European literature typifying enduring human traits and qualities. It also shows how a character in a classical work can be developed and explored against a contemporary setting.

Indeed every great character in fiction prompts further exploration and further creativity in writers to come. A comparative approach is encouraged throughout.

For instance, the Sinbad Story from the *Thousand and One Nights* has been set to be compared and contrasted with Homer's *Odyssey*. Odysseus and Sinbad venture forth on their travels with quite different attitudes to adventure and distinct views of the Universe.

This unit seeks to lead students through literature to a deeper under-

standing of the study of man as a social being.

The texts in this unit should be covered in two years.

The first four units are covered by Paper I of the Matriculation Examination.

1.35 Scientific Methods and History of Science

This unit, together with Unit 6, will normally be covered in the second year of the course and will be formally tested through Paper II of the Matriculation Examination.

Like unit 6, it both complements, and contrasts with, the main 'A' Level courses. It seeks to broaden the mathematics/science sixth-form curriculum by helping students to stand back from their specialist activities and to learn something of how physical science has grown, to trace out the steps by which it has attained to its present power and importance and to think seriously about the moral and philosophical issues raised by the sciences.

Candidates are thus encouraged to consider the broader implications of their study from a personal point of view.

Principally, it broadens the curriculum within the arts/humanities area, especially for those not studying Philosophy at 'A' Level, and offers them a stimulating and relevant course, one that is essential in our scientific age.

1.36 Artistic Aims and Achievements

This unit obviously complements the curriculum for students following 'A' Level courses within the Arts/Humanities area who are not studying History of Art and offers a stimulating contrast to science/mathematics students.

Apart from helping them to view works of Art in a historical perspective, this unit seeks to help students perceive a coherent relationship between seeing and understanding, engendering an awareness of art as a major visible aspect of human endeavour.

Also, this module helps the student to understand the role of the artist, the architect and the craftsman down the ages. It should also provide a sound basis for further study and the pursuit of personal interest.

1.4 Assessment Objectives

The examination will assess a candidate's ability to:

- (a) understand the disciplines, concepts and methods applicable to the topics being studied;
- (b) relate subjects studied to one another, general knowledge and living experience;

- (c) look at events and issues from the perspectives of people in the past;
- (d) analyse and evaluate a variety of types of evidence, making use of the concepts of cause and consequences, continuity and change, similarity and difference;
- (e) use language clearly, consistently and appropriately;
- (f) give evidence of appreciation of the strengths and the limitations of the various kinds of knowledge as well as their similarities and differences;
- (g) understand the influence of Literature, Art, and Science upon society.

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SYLLABUS FOR 1989

Two papers are set and candidates must show competence in each. The papers will be set as follows:

2.1 Exam. Papers. — Paper I (three hours)

Paper I will cover Part A of the syllabus. Candidates will be required to answer four questions, one from each section.

Paper II (two hours)

Paper II will cover Parts B and C of the syllabus. Candidates will be required to answer three questions: one from each Part and a third from either Part B or Part C.

2.2 Notes

1. *Set Texts.* These books are for compulsory study. Candidates are required to have a thorough knowledge of their contents.
2. *Recommended Reading.* These books are intended to indicate the range of topics candidates are expected to be able to tackle.
3. *Further Reading.* Candidates are not required to have read any of the books on the lists. They may, however, gain a wider and deeper knowledge of the subject by consulting at least some of them. The titles in this group are intended mainly to serve as a guide for teachers, who may refer their students to as many, or as few, of them as they think fit.

4. Questions will be set in English but may be answered either in Maltese or in English.

2.3 Syllabus

2.31 Part A

1. *Man and Symbols.*

- (a) Thinking: theoretical and practical.
 (b) Communication: language and other media.

2. *Man and Environment*

- (a) world population, development, energy, urbanization, food, water, environmental hazards.
 (b) government (rule of law and division of powers) and the principal institutions of social life.

3. *Man and History: the Mediterranean and its role in the world.*

4. *Set Texts:*

(a) *Man on a Journey.*

Homer: *The Odyssey*, translated by Walter Shewring. Oxford Univ. Press.
 (The World's Classics).

Tales from the Thousand and One Nights, translated by N. J. Dawood, Penguin.

Cervantes: *Don Quixote*, translated from the Spanish by J. M. Cohen. Penguin.

Graham Greene: *Monsignor Quixote*, Penguin.

(b) *Man under Judgement.*

Plato: *Last days of Socrates*, translated from the Greek by H. Tredennick. Penguin.

Portable Dante, edited by Paolo Milano, Penguin.

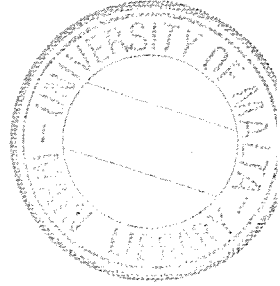
F. M. Dostoevsky: *Crime and Punishment*, translated from the Russian by D. Magarshack, Penguin.

Bernanos, Georges: *Monsignor Quine*, translated by William Bush, Dutton.

2.32 Part B

Scientific Methods and History of Science

- (a) The celestial Clockwork (from prehistory to Copernicus to Newton to the special Theory of Relativity).
 (b) The salt of the Earth (from elements/compounds to atoms/atomic structure to nuclear/nucleo-genesis).



- (c) From Unity to Diversity (the beginning of life on Earth, Evolution, search for life in the Universe).
- (d) Anatomy of the Earth (sizing up the Earth, shape of the Earth, the Earth's interior, the dynamic face of the Earth).

2.33 Part C

1. *Artistic Aims and Achievements*

- (a) From Primitive Art to the Greeks
- (b) From Rome to the Renaissance
- (c) From Baroque art to Cézanne
- (d) Contemporary Art.

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SCHEMES OF WORK

The following Schemes of Work are only one example of how the Syllabus may be covered. They were drawn up with the help of Dr. Victor Mallia-Milanes, Mr. John Agius, Mr. Mario Buhagiar, Mr. Saviour Rizzo, Mr. Michael Zammit and Mr. Charles Sammut.

3.1 Part A

3.11 Man and Symbols

1. A love of Wisdom is necessary for the right use of Thinking and Communication. (Consult, for instance, Aquinas: 'In what consists the office of the Wise Man').
- (a) *Thinking*
2. Aristotle's classification into theoretical and practical. De Bono's classification: insight, sequential, strategic, lateral.
 3. Starting-points and end-points. Common faults, drift and confusion: how to deal with them.
 4. Strategies for problem-solving.
 5. 'Understand' and its relations to 'Explaining'. Levels of Understanding.
 6. Introduction to formal logic: its uses and limitations. Subject-words (names) and predicate-words (concepts).
 7. The Propositional Statement: negation and quantification.
 8. Deduction.
 9. Other forms of reasoning (probability, etc.).
- (b) *Forms of Communication*
10. The Nature of Communication. Characteristics of a communicative act.

Diversity of forms.

11. The Nature of Language.
12. Barriers in Language and Verbal Interaction. Principles of Language and Verbal Interaction.
13. Social aspects of language.
14. Mass Communication: different functions.
15. Critical understanding of Film and TV.
16. Social Aspects of Mass Communication.

Recommended reading:

Edward de Bono: *De Bono's Thinking Course*, Ariel Books, BBC, 1985.

Anthony Flew: *Thinking about Thinking*, Fontana, 1985.

D. Crystal: *Linguistics*, Penguin, 2nd edition, 1987.

Denis McQuail: *Mass Communication Theory: An Introduction*, Sage, 1984.

Further reading:

P. T. Geach: *Reason and Argument*, Blackwell, 1977.

W. van Orman Quine and J. S. Ullian: *The Web of Belief*, Random House, 1978.

3.12 Man and Environment

Section A

1. World Population
 - (a) The dynamics of population growth.
 - (b) Patterns of change. Demographic transition.
 - (c) Structure of population and theories of ecological checks.
2. Urbanisation
 - (a) Factors of urban growth and main world urban areas. Rank-Size Rule.
 - (b) Urban functions: Analysis.
 - (c) Urban models.
3. Economic Development
 - (a) Characteristics: pre-industrial and industrial societies. Employment in agriculture.
 - (b) Employment structure. Problems of developing countries. Regional problems of development.
4. Energy
 - (a) Economic development and energy consumption: A correlation. Man's energy resources.
 - (b) Extraction of non-renewable resources: ecological problems.

- (c) Renewable resources: solar, wind, water. Geothermal environmental impacts.
- 5. Food
 - (a) Agricultural ecosystems and general principles.
 - (b) Farming in (i) developing countries
(ii) developed countries.
- 6. Water
 - (a) The hydrological cycle. Surface and ground water sources.
 - (b) Malta's natural water supply. Water pollution.
- 7. Environmental Hazards
 - (a) Hazards relating to land: earthquakes, volcanic eruptions, etc.
 - (b) Hazards relating to the atmosphere: extremes of heat, cold, hurricanes.
 - (c) Hazards relating to water: floods, tidal waves, etc.

Section B

1. Social Control and Maintenance of Order
 - Complex Society: shared values, rules and sanctions (positive and negative).
2. Power and Authority
 - Legitimacy of Power.
 - Value Consensus View and Conflict View of Society.
3. Division of Powers
 - Legislative, Executive and Judicial.
 - How these are enshrined in the Maltese Constitution.
4. Pressure Groups and Pluralism
 - Interest and promotional groups. Their functions.
 - A pluralist model of society.
5. Political Modernization. Difference between Developed and Less-Developed Countries
 - Factors that tend to lower legitimacy.
 - Historical, economic/social, political factors.
6. Democracy and Party System
 - Preconditions for democracy.
 - Advantages/disadvantages of party system.
 - Totalitarianism.

7. Political Issues and Political Ideologies
 - Dominant issues.
 - Conservative, Liberal, Radical Ideologies.
8. Social Policy and the Welfare State. Laissez-Faire. State Intervention
 - Family and education as social institutions.
 - Housing, poverty and Welfare schemes.
9. Government and Freedom. The Legal System
 - Freedom from arbitrary arrest.
 - Freedom of speech, association, assembly, religion.
10. Policy Making and the Civil Service
 - The Constitution. Bureaucracy.
11. Participation Theory and Government.
 - Dimensions of Participation.
 - Industrial democracy.
 - Rousseau's Theory.

Recommended reading:

- (a) B. J. Nebel & E. J. Kormondy: *Environmental Science: The Way the World Works*, Prentice-Hall, 1981.
J. M. Moran et al.: *Introduction to Environmental Science*, Freeman, 1980.
- (b) Alan R. Ball: *Modern Politics and Government*, Macmillan 1983.

Further reading:

- (a) G. T. Muller: *Living in the Environment: An Introduction to Environmental Science*, Wadsworth Publications, 1985.
A. Turk et al.: *Environmental Science*, Saunders, 1978.
- (b) Barbara Goodwin: *Using Political Ideas*, Wiley, 1982.

3.13 Man and History: The Mediterranean and its role in the world

1. The Permanence of Change as the essence of History. The Role of Man in History.
2. Fernand Braudel's Vision of History: The Concept of Time.
3. The Classical World: The Mediterranean and the spread of Hellenism.
4. The Classical World: The Mediterranean as a Roman Lake.
5. The Spread of Islam.
6. The Normans and the Crusades.
7. Monasticism: Christianity and the emergence of Humanistic Thought.
8. The Maritime Republics: Venice as a case history.

9. The Sixteenth Century: The Struggle for Mastery in the Mediterranean.
10. The Principles of 1789.
Napoleon Bonaparte.
11. The Rise of Nationalism.
The Struggle for Greek Independence. The Italian Risorgimento.
Turkish Nationalism.
12. Jewish Nationalism and Arab Nationalism.
13. Fascism.
14. The Mediterranean and the Second World War.
15. Colonialism in its historical and conceptual context.
Decolonization.
16. Mass Tourism in the Mediterranean.
The Super Powers.

Recommended reading:

F. Braudel: *The Mediterranean and the Mediterranean World in the Age of Philip II*, Fontana, 1975.

Further reading:

E. Bradford: *Mediterranean: Portrait of a Sea*, Hodder and Stoughton, 1971.

3.14 Set Texts

A. Homer: *The Odyssey*

1. The Homeric Problem.
 - (a) Ancient Greek tradition about Homer.
 - (b) The attitude of modern scholarship.
 - (c) Status of the Bard in archaic and ancient Greece.
2. The Historical and Archeological background to the Homeric Epics.
 - (a) Are there elements of historical truth in the story of Troy?
 - (b) The excavations of Schliemann, Dorfeld and Blegen.
 - (c) The story of the *Iliad*.
3. The Text.
 - (a) The story of *The Odyssey*.
 - (b) Differences between the *Iliad* and *The Odyssey*.
 - (c) The Folk-tale element and the Mariners' Tales element in *The Odyssey*.
4. Greek Mythology.
 - (a) Greek Mythology with particular reference to *The Odyssey*.

- (b) The supernatural element in *The Odyssey*.
- 5. General Considerations (1).
 - (a) The Greek world at the time of Homer.
 - (b) The importance of the Homeric Epics in Greek and Latin Literature with special reference to Virgil's *Aeneid*.
- 6. General Considerations (2).
 - (a) The importance of the Homeric Epics in the history of Western Civilization.
 - (b) Malta and *The Odyssey*.
 - (c) The figure of Odysseus.
- B. *The Arabian Nights* with special reference to the story of *Sinbad the Sailor*
 - 1. Background.
 - (a) The origins of *The Arabian Nights*.
 - (b) The *Nights* as masterpieces of the art of story-telling.
 - (c) The *Nights* as a faithful mirror of the life and manners of Medieval Islam.
 - 2. The 'Prologue' to the *Nights*.
The story of *Sinbad*.
 - 3. The influence of *The Odyssey* on the story of *Sinbad*.
Odysseus and *Sinbad*.
The element of destiny in *Sinbad the Sailor*.
- C. *Cervantes: Don Quixote*
 - 1. Spanish literature as one of the greatest literatures of the world.
Stories of Chivalry in Spanish Literature. *Don Quixote* as a parody of stories of chivalry.
 - 2. Miguel de Cervantes: biographical details.
How the life and experiences of Cervantes are woven into the fabric of *Don Quixote*.
 - 3. Spain at the time of Cervantes.
 - 4. The Main Characters: Don Quixote and Sancho Panza.
 - 5. Is Don Quixote simply a crazy gentleman?
The dreamer in *Don Quixote*.

The world of dreams and real life in *Don Quixote*.

6. *Don Quixote* as a criticism of life.
Don Quixote as a masterpiece of world literature.
- D. Graham Greene: *Monsignor Quixote*
1. Graham Greene: the man and the novelist.
Graham Greene as a Catholic novelist.
 2. *The Power and the Glory* and *Monsignor Quixote*.
Is Monsignor Quixote a fit sobriquet for the Catholic priest in *Monsignor Quixote*?
 3. The conflicting philosophy of life of the Catholic priest and his Marxist travelling companions in *Monsignor Quixote*: a discussion.

Schemes of work for 'Man under Judgement', to be covered in the second year of the course, will be published later.

Further reading:

Ernie Bradford: *Ulysses found*, New Edition, Century Pub., 1985.
Timothy Severin: *Sinbad's Voyage*, Hutchinson, 1987.

3.2 Scientific Methods and History of Science

3.21 J. Bronowski:

The Starry Messenger – The cycle of seasons – The unmapped sky – Ptolemy's system in the Dondi Clock – Copernicus: the sun as centre – The telescope – Galileo opens the scientific method – Prohibition of the Copernican system – Dialogue on the two systems – The Inquisition – Galileo recants – The Scientific Revolution moves north.

The Majestic Clockwork

Kepler's laws – The centre of the world – Isaac Newton's innovations: fluxions – Unfolding the spectrum – Gravitation and the Principia – The intellectual dictator – Challenge in satire – Newton's absolute space – Absolute time – Albert Einstein – The traveller carries his own space and time – Relativity is proved – The new philosophy.

3.22 The Hidden Structure

Fire, the transforming element – Extraction of metals: copper – The structure of alloys – Bronze as a work of art – Iron to steel – Gold –

The incorruptible – Alchemical theory of man and nature – Paracelsus and the coming of chemistry – Fire and air: Joseph Priestley – Antoine Lavoisier: combination can be quantified – John Dalton's atomic theory.

World within World

The cube of salt – Its elements – Mendeleev – The periodic table – J. J. Thomson: the atom has parts – Structure in new art – Structure in the atom: Rutherford and Niels Bohr – The life cycle of a theory – The nucleus has parts – The neutron: Chadwick and Fermi – Evolution of the elements – The second law as statistics – Stratified stability – Copying the physics of nature – Ludwig Boltzmann: atoms are real.

Knowledge or Certainty

There is no absolute knowledge – The spectrum of invisible radiations – The refinement of detail-Gauss and the idea of uncertainty – The sub-structure of reality: Max Born – Heisenber's principle of uncertainty – The principle of tolerance: Leo Szilard – Science is human.

3.23 The Ladder of Creation

The naturalists – Charles Darwin – Alfred Wallace – Impact of South America – The wealth of species – Wallace loses his collection – Natural selection conceived – The continuity of evolution – Louis Pasteur: right hand, left hand – Chemical constants in evolution – The origin of life – The four bases – Are other forms of life possible?

Generation upon Generation

The voice of insurrection – The kitchen garden naturalist: Gregor Mendel – Genetics of the pea – Instant oblivion – An all-or-nothing model of inheritance – The magic number two: sex – Crick and Watson's Model of DNA – Replication and growth – Cloning of identical forms – Sexual choice in human diversity.

3.24 Anatomy of the Earth

1. Origin of the Earth: Theories, dates, relation to solar system and universe.
2. Dating the Earth: radioactivity; fossil correlation.
3. Structure of Earth: shape; chemistry (relation to solar system and universe); interior structure – core, mantle and crust; seismic evidence.
4. The surface of the Earth: oceanic/continental crust; isostasy; geomorphology – weathering, erosion, orogeny, volcanicity.

5. Major Rock Types: igneous, metamorphic, sedimentary; fossils.
6. Plate Tectonics: Historical development; evidence for continental drift; Wegener's contribution.
7. The Maltese Islands: their formation and place in the development of the Mediterranean basin; age; geological features.

Recommended reading:

J. Bronowski: *The Ascent of Man*, Futura, 1981.

Further reading:

M. Goldstein and I. Goldstein: *The Experience of Science: An Interdisciplinary Approach*, Plenum Press, 1984.

A. Koestler: *The Sleepwalkers: A History of Man's Changing Vision of the Universe*, Penguin.

Carl Sagan: *Broca's Brain: The Romance of Science*, Hodder, 1980.

3.3 Artistic Aims and Achievements

3.31 From Primitive Art to the Greeks

1. The Origins of Art: From Palaeolithic to the Early Bronze Age.
2. The Art of the Early Empires of the Middle East – Egypt and Mesopotamia.
3. The Aegean World: Crete, Mycenae and Archaic Greek Art.
4. Classical Greek Art.
5. The Hellenistic World.

3.3.2 From Rome to the Renaissance

1. Roman Art as a consolidation of the Hellenistic tradition.
2. Rome, Pompeii and Herculaneum.
3. The impact of Christianity and the origins and development of Byzantine Art.
4. Carolingian, Ottonian and Romanesque Art.
5. The great Gothic Cathedrals.
6. Giotto and the rise of Humanism.
7. The Early Renaissance – Siennese, Tuscan and Flemish Art.
8. The Golden Age of the High Renaissance: Rome and Venice.

3.33 From Baroque Art to Cezanne

1. Mannerism and Early Baroque – From Michelangelo to Caravaggio and Annibale Carracci.

2. High Baroque Art – Rome and Gian Lorenzo Bernini.
3. Colour versus Design – Peter Paul Rubens and Nicholas Poussin.
4. Rococo Art in France and Bavaria.
5. Neo-Classicism and Romanticism.
6. Impressionism.

3.34 Contemporary Art

1. Post-Impressionism – Georges Seurat, Paul Gauguin and Vincent Van Gogh.
2. Expressionism, Fauvism and Cubism.
3. Pablo Picasso.
4. The Contemporary Scene.

Recommended reading:

Kenneth Clark: *Civilization*, Penguin, 1982.

Further reading:

E. H. Gombrich: *Story of Art*, Phaidon Press, 1984.

4

SPECIMEN PAPER

4.1 Systems of Knowledge Paper 1 Three Hours

Attempt ONE question from EACH section

1. *Man and Symbols*
1. 'Wisdom directs thinking to the consideration of the Highest causes'. Discuss with reference to any philosopher of your choice.
2. How can one construct four equilateral triangles out of six matches where each side of a triangle is equal in length to the length of the matches? Comment fully on how you tackle this even if no solution is forthcoming. How would you go about solving such a problem? What are the difficulties encountered?
3. From Aldous Huxley: 'The Doors of Perception'.
"We live together, we act on, and react to, one another; but always and in all circumstances we are by ourselves. The martyrs go hand

in hand into the arena; they are crucified alone. Embraced, the lovers desperately try to fuse their insulated ecstasies into a single self transcendence; in vain. By its very nature every embodied spirit is doomed to suffer and enjoy in solitude.

Sensations, feelings, insights, fancies – all these are private and, except through symbols and at second hand, incommunicable. We can pool information about experiences, but never the experiences themselves”.

Is this an example of valid reasoning?

What are the premises of the argument?

Are there any unstated assumptions?

Do the conclusions follow?

4. “I can only talk to myself because I can talk to others.” Discuss.
5. “Any communication act involves a sequence of events starting with a decision to transmit meaning”. Consider the programme “It-Temp Illum” in terms of the following basic elements:

Elements of a simple model of communication involving:

1. Communicator.
2. The message.
3. Encoding.
4. Transmission.
5. Receiver.

Man and Environment

6. Analyse the importance of conducting periodic censuses of population within a given country, e.g. Malta.
7. Describe and account for the different land-uses found within the average Maltese town or settlement.
8. Examine the direct and indirect impact on man of any one of the following: (a) Air pollution.
(b) Marine pollution.
(c) Land pollution.
9. How do you account for the fact that legitimisation of authority is difficult to obtain in less developed countries?
10. To what extent is the division of the powers of the State into legislative, executive and judicial inscribed in the Maltese Constitution?
11. Poverty, poor housing, ignorance etc. are not personal problems; they should be the concern of every Government. Discuss.

Man and History The Mediterranean and its role in the World

12. In Fernand Braudel's view of History, time does not move at a uniform speed. In the light of this statement and with particular reference to the Mediterranean, distinguish between 'short term' (or individual time), 'medium term' (or social time) and 'long term' (or geographical time).
13. In spite of physical, economic and cultural differences between the western and eastern parts of the Mediterranean, the sea remains a unity. Discuss.
14. The Turkish Siege of Malta of 1565 was in no way a determining factor in the decline of the Ottoman Empire. Do you agree? Give reasons for your answer.
15. Account for the 'immense infiltration by northern, Atlantic, international capitalism' into the Mediterranean from the later sixteenth century onwards.
16. What role did the Mediterranean play in the Second World War?

Set Texts

17. The bard enjoyed a special status in the archaic Greek world to which Homer belonged. What do we learn from *The Odyssey* about his status and the nature of his performance?
18. Compare and contrast the adventures of Odysseus (*The Odyssey*) and Sinbad the Sailor (*The Arabian Nights*).
19. To what extent do *The Arabian Nights* stories reflect the life and customs of the common man in a typically Muslim environment?
20. *Don Quixote* is a vast canvas depicting life in Spain in all its variegated aspects at the end of the sixteenth century. Discuss.
21. Discuss the conflict between the values held by the Catholic priest and those entertained by his Marxist travelling companion in Graham Greene's *Monsignor Quixote*.
22. Socrates accepts even death with an ironic smile. How is this attitude reflected in his style of speaking?
23. Compare Plato's with Dante's pictures of the afterlife.
24. Socrates held that no one commits evil knowingly. Are there examples to the contrary in the works of any of the other writers you have studied (Dante, Dostoevsky, Bernanos)?
25. How far do Dostoevsky and Bernanos agree on the factors which lead men into crime?
26. Does the discussion of ideas help or handicap the telling of the story in any one of the set books you have studied?

4.2 Systems of Knowledge Paper II Two Hours

Answer three questions: one from each Part and a third from either PART B or PART C.

PART B Scientific Methods and History of Science

1. Discuss Galileo's, Newton's and later scientists' (up to 1900) contributions to the resolution of the problems related to the movements of the moon and planets and show how these contributions led to the development of the physics of motion.
2. Starting from the model of the nuclear atom postulated by Bohr, outline the major developments that led to the modern picture of the structure of the atom (consisting of electrons arranged in orbitals and a central nucleus of protons and neutrons held together by a strong force).
3. Briefly mention the main arguments in the 1860s for and against the theory of evolution and explain how this theory has now become so widely accepted.
4. What evidence did Wegener quote to explain his theory of plate structure of the continents. How has this theory become so firmly established (what further theoretical and experimental evidence has been brought in its support)?
5. The discovery of metals was a major step in the progress of civilization. Explain why:
 - (a) certain metals were discovered long before others; e.g. copper was discovered before iron;
 - (b) when a piece of copper is stretched in the form of a wire it yields;
 - (c) the alloying of copper and tin produces bronze which is harder than both;
 - (d) gold was and still is much used for making ornaments.
6. Elements combine with each other in fixed proportion by weight to form compounds. Explain how this is related to the fact that chemical reaction between elements involves combinations between their atoms.
7. Describe Mendel's experiments and the results that led him to formulate the Laws of Heredity.
8. The DNA molecule has been an important protagonist not only of scientific journals and books but also of newspapers and non-scientific magazines. Describe the structure of DNA with particular reference to the important contribution of Watson and Crick in its discovery.

PART C Artistic Aims and Achievements

1. Write an account and appreciation of the Parthenon with particular

- reference to its surviving sculptures (the 'Elgin Marbles').
2. Professor J. M. C. Toynbee in her book *The Art of the Romans* describes the Romans as a people "not naturally endowed with creative genius". Do you agree?
 3. What do you understand by "International Gothic"? Illustrate your answer by references to works of art with which you are familiar.
 4. Describe in some detail the life and work of either Donatello or Michelangelo Buonarroti.
 5. Write an essay on *Caravaggio as a Rebel Artist*.
 6. Discuss the intellectual content in Neo-Classical Art.
 7. Write a brief critical appreciation of the works of two of the following artists:
Pierre Auguste Renoir; Edouard Monet; Vincent Van Gogh; Auguste Rodin.
 8. The personality of Pablo Picasso dominated the development of the visual arts during most of the first half of the 20th century. Discuss.

5

MARKING SCHEME

The students will be answering seven questions, each of which will carry a maximum of 10 marks. Another 30 marks will be allotted according to the following draft marking scheme:

5.1 Understanding of more than one area of the Syllabus Content.

	Mark Allocation
The candidate:	
(a) did not demonstrate understanding of any part of the syllabus.	0
(b) demonstrate superficial understanding of only one area of the syllabus.	1
(c) demonstrated good understanding in the context of issues of one area of the syllabus but not of more than one as required.	2
(d) demonstrated good understanding of one area of the syllabus and only superficial understanding of another.	3
(e) demonstrated good understanding of more than one area of the syllabus.	4
(f) demonstrated detailed and thorough understanding of more than one area of the syllabus.	5

5.2 Reference to, and appropriate use of, a variety of types of evidence

The candidate:	
(a) omitted to refer to any evidence, as required.	0

- (b) referred to and used as illustrative material information which related only superficially to the subjects dealt with. 1
- (c) referred to material validly intended as evidence but failed to demonstrate its relevance to the subjects dealt with. 2
- (d) referred to and used at least one appropriate type of evidence, clearly demonstrating its relevance to the subjects dealt with. 3
- (e) referred to and used two appropriate types of evidence, clearly demonstrating their relevance to the subjects dealt with. 4
- (f) referred to and used a variety of appropriate types of evidence clearly demonstrating their relevance to the subjects dealt with. 5

5.3 Analysis and Evaluation.

In referring to and using a variety of appropriate types of evidence, the candidate:

- (a) did not attempt to analyse the material. 0
- (b) attempted to analyse the material but at a superficial level only. 1
- (c) analysed some of the material but was unable to reach relevant conclusions. 2
- (d) analysed most of the material well and reached conclusions which, though relevant, showed limited perception. 3
- (e) analysed the material thoroughly and reached relevant and perceptive conclusions. 4
- (f) achieved evaluation in depth as a result of detailed and perceptive analysis. 5

5.4 Communication.

The candidate:

- (a) has used only a written, discursive method of communication. 2
- (b) communicated in a variety of ways, both verbally and non-verbally at a basic level. 3
- (c) communicated in a variety of ways, both verbally and non-verbally. 4
- (d) communicated in a variety of ways, both verbally and non-verbally, in an appropriate and distinctive manner. 5

5.5 Presentation.

The Candidate:

- (a) has failed to organise the material in any logical or coherent form. 0
- (b) has not succeeded in presenting the material logically or coherently but has referred to some sources. 1
- (c) has made some attempt to plan the material in a logical sequence, although not always successfully. 2
- (d) has planned and set out the material in a logical and appropriate sequence. 3
- (e) has organised and presented totally relevant material in a logical and appropriate sequence. 4

- (f) has presented a coherent study in which the various strands of totally relevant material have been organized into a logical, appropriate form which is both original and valid. 5

5.6 Interdisciplinarity.

The candidate:

- (a) has ignored the requirement to attempt interdisciplinarity. 0
(b) made an attempt to achieve interdisciplinarity but failed. 1
(c) has imposed a superficial level of interdisciplinarity upon the material. 2
(d) has achieved interdisciplinarity in parts of the material but has not sustained this throughout. 3
(e) has produced well integrated interdisciplinary material. 4
(f) has produced interdisciplinary material the integration of which is both original and perceptive. 5

TOTAL MARKS AVAILABLE = 30.

5.7 GRADING SCHEME

The pass grades shall be A, B, C, D, and E. A being the highest and E the lowest.

The results of candidates who do not obtain at least a Grade E shall remain unclassified.

DR. PAUL HEYWOOD is Head of the New Lyceum, Msida and Chairman of the Council of the University of Malta.

REV. PROF. PETER SERRACINO INGLOTT is Rector of the University of Malta.