

UNIVERSITY OF MALTA
THE MATRICULATION CERTIFICATE EXAMINATION
ADVANCED LEVEL

GRAPHICAL COMMUNICATION
May 2011

MARKING SCHEME

MATRICULATION AND SECONDARY EDUCATION
CERTIFICATE EXAMINATIONS BOARD

PAPER I

Question 1 - Development

i)	Drawing the plan	2
	Drawing elevation	2
ii)	Dividing circle	1
	Splitting the piece into triangles	3
	Showing correct method for true lengths	2
	Taking different altitudes	2
	Construction of development by triangulation	6
	Fold lines	1
	Presentation	1

Total **20**

Question 2 - Cycloid

i)	Dividing height and length into equal number of parts or equivalent	5
	Stepping off divisions from outer diameter	1
	Projecting divisions from inner diameter	1
	Clockwise rotation of inner radius	2
	Presentation	1
ii)	Pivoting circle around corner	2
	Stepping off 9 outer divisions on arc	2
	Projecting divisions on centre arc	2
	Projecting arcs from inner diameter	2
	Correct rotation	1
iii)	Correct name (Inferior Hypotrochoid)	1

Total **20**

Question 3 – Vectors

i)	Construction of space diagram to scale	4
ii)	Polar diagram to scale	3
	Bending moment diagram	4
iii)	Finding reactions at Y and the hinge	1,2
iv)	Correct method for analysing each member	6

Total **20**

Question 4 – HVT

- | | | |
|------|------------------------------------|---|
| i) | Copy the given auxiliary elevation | 4 |
| ii) | Projecting a plan | 6 |
| iii) | Projection of elevation | 7 |
| iv) | Projection of side elevation | 3 |

Total **20**

Question 5 – Interpenetration

- | | | |
|-----|---|-----|
| i) | Copy the given views | 3 |
| | Projection of divisions on cylinder | 3 |
| | Construction of generators to show points of intersection | 4 |
| | Lining in curve of intersection including hidden detail | 1,1 |
| ii) | Marking off length of development | 3 |
| | Stepping off lengths from the elevation | 3 |
| | Lining in freehand curve and presentation | 2 |

Total **20**

Question 6 – Solids in Contact

- | | | |
|------|--|-----|
| i) | Copy the given views | 3,3 |
| ii) | Point of contact in both views | 1,1 |
| iii) | Projecting of auxiliary view on X1Y1 | 6 |
| iv) | Projection of 2 nd auxiliary view | 6 |

Total **20**

PAPER II

Question 1 - Isometric

iii)	Drawing the plan	2
	Drawing elevation	2
	Correct Scale 1:2	1
	Freehand Drawing	1
iv)	Correct Angles	1
	Base in isometric	3
	Lateral arcs in isometric	2
	Star in isometric	3
	Badge and Logo	2
	Presentation	2
	Constructions for isometric clearly shown	1
v)	Freehand sketch	2
	Suitable and complementary materials	3
	Suitable and complementary colours	3
vi)	Effective use of colour to represent material	3
	Shading	3
Total		34

Question 2 - Perspective

iv)	Three different sketches suitable orientated	2,2,2
v)	Proportional size of room	1
	Correct depth of room in perspective	2
	Position and size of windows and door in perspective	3
	Position and size of couch in perspective	3
	Unit , carpet and accessories	1,1,1
vi)	Warm colour scheme choice	2
	Rendering	2
Total		22

Question 3 – Graphical Representation

v)	Themed Presentation	3
	Suitable Pictograms for the 3 criteria	1,1,1
	Clear presentation of the different values	3
	Effective colour use especially Green and Red	3

vi) a	Suitable pictograms for each light	2
	Suitable charts for comparing	2
	Use of Colour	1
b	Suitable pictograms for each light	2
	Suitable charts for comparing	2
	Use of Colour	1
Total		20
Question 4 – Pictorial Drawing		
v)	Well organised chart	2
	Suitable solid for presentation	2
	Each pictorial drawing	2 x 7
	Included notes and Lettering	2
Total		20
Question 5 – Design		
iii) a	Written analysis	2
b	Graphical Analysis	4
c	Graphical Synthesis	4
d	Final realization	10
e	Evaluation	2
Total		20