

Table of Contents

1. Plant Science 2.....	1	Arrangement of Flowers:.....	33
1.1 Leaf adaptations.....	1	Flower Timing:.....	35
Leaf Function – Unit 1 Recap.....	1	Petal Adaptations:.....	37
Hairy Leaves:.....	2	Flower Scent:.....	37
Waxy Leaves:.....	4	Nectar Production:.....	38
Succulent Leaves:.....	5	Hermaphrodite Flowers:.....	38
Rolled Leaves:.....	6	Monoecious Plants:.....	39
Reduced Leaves:.....	6	Dioecious Plants:.....	39
Leaf Oils:.....	6	Pollen:.....	39
Bulbs:.....	7	Pollination:.....	40
Coloured Leaves:.....	9	Flowers and Biodiversity:.....	42
Variegated Leaves:.....	10		
Aerenchyma Cells:.....	10	1.5 Seed adaptations.....	43
Totipotency in Leaves:.....	10	Function of Seeds:.....	43
Plant Leaves and Growing Conditions:.....	11	Quantity of Seed:.....	43
Benefits of Leaf Adaptations to Green Spaces:.....	11	Seed Dispersal:.....	44
1.2 Stem adaptations	13	Seed Dormancy:.....	46
Stem Function – Unit 1 Recap.....	13	Seed Coats:.....	47
Secondary Thickening:.....	14	Lipid (fats/oils) Storage:.....	47
Physical Defence:.....	15	Orthodox Seeds:.....	47
Stem Tendrils:.....	16	Recalcitrant Seeds:.....	48
.....	16	Germination Requirements:.....	48
Twining Stems:.....	16	Encouraging Germination:.....	48
Stolons and runners:.....	17	Seeds and Biodiversity:.....	49
Rhizomes:.....	18	Seeds and Garden Maintenance:.....	49
Stem Tubers:.....	19		
Corms:.....	19	1.6 Growth Habit Adaptations	51
.....	19	Woody Plants:.....	51
Water storage in succulent stems:.....	20	Herbaceous Perennials:.....	52
Colonisation via Stems:.....	20	Low Growing Plants:.....	53
Glandular Hairs:.....	21	Evergreen and Deciduous:.....	55
Ducts containing essential oil:.....	21	Growth Habit and Plant Selection:.....	56
Totipotency in Stems:.....	21	Growth Habit and Biodiversity:.....	57
Stems and Wildlife Habitats:.....	22		
Decorative Stems:.....	22	2. Planting Styles	58
Stems and Garden Design Styles:.....	22	2.1 Historical Contexts.....	58
1.3 Root adaptations.....	24	Overview of Garden History:.....	58
Root Function – Unit 1 Recap.....	24	Renaissance Gardens:.....	58
Fibrous Roots:.....	25	Landscape Style:.....	60
Tap Roots:.....	25	Picturesque Style:.....	62
Foraging Roots:.....	26	Gardenesque Style:.....	64
Root Tropisms:.....	27	Arts and Crafts Gardens:.....	66
Totipotency in Roots:.....	27	The Wild Garden:.....	69
Adventitious Root Buds:.....	27	Modern Garden Styles:.....	71
Root Tubers:.....	28	Influence of Historic Styles over time:.....	72
Adventitious Roots:.....	29	Influence of Historic Styles on Today's Garden Design:.....	72
Adventitious climbing roots.....	30		72
Prop Roots:.....	30	Preserving Historic Gardens:.....	73
Root Nodules in Legumes:.....	30		
Pneumatophores:.....	31	2.2 Formal Planting	74
1.4 Flower adaptations	32	Overview of Formal Planting:.....	74
Flower Function – Unit 1 Recap.....	32	Symmetry:.....	74
		Geometric Layout:.....	74
		Formal Hedges:.....	74
		Low Enclosing Hedges:.....	74

Monochromatic and Dichromatic Colour Schemes:	75	2.7 Short-term Plantings	108
Planting in Even Numbers:.....	75	Overview of Short-term Plantings:	108
Formal Water Features:	75	Suitable Plants:.....	108
Adapting Features to Formal Settings:.....	75	Environmental Impact of Short-term Plantings:109	
Plant Adaptations and Formal Planting:	76	Impact of Short-term Plantings on Biodiversity:110	
Formal Planting and Biodiversity:.....	76		
Formal Planting and Sustainability:	76	3. Horticulture and Society.....	111
2.3 Informal Planting	78	3.1 Wellbeing.....	111
Overview of Informal Planting:	78	Physical and Mental Health Benefits:	111
Informal Layouts:	78	Social Benefits of Gardening:.....	112
Informal Plant Arrangement:.....	78	Social Benefits of Urban Greening:	112
Informal Colour Palette:.....	79	Social Benefits of Allotments:.....	113
Planting in Odd Numbers:.....	80	Historic Wellbeing Links:	113
Informal Water Features:	80	3.2 Environment.....	115
Adapting Features to Informal Settings:.....	80	Plant Ecosystem Services:	115
Plant Adaptations and Informal Planting:	81	Carbon Storage:.....	117
Informal Planting and Biodiversity:.....	82	Negative Impacts of Horticulture:	118
Informal Planting and Sustainability:.....	82	Climate Change and Horticulture:.....	121
2.4 Plant Associations	84	Benefits of Horticultural Spaces to the Environment:	123
Colour Schemes:	84	3.3 Economy	125
Plant Height and Form:.....	84	Garden Tourism:.....	125
Seasonal Interest:	85	Garden Maintenance and Landscaping:	125
Plant Selection and Garden Style:	87	Plant Production:	125
Plant Adaptations and Plant Associations:	87	Retail:	125
Plant Associations and Biodiversity:.....	88	Food Production:	125
2.5 Plant Uses	89	Arboriculture:	125
Height and Structure:.....	89	Other Horticultural Benefits to the Economy:126	
Shade:	90	3.4 Community.....	127
Attracting Wildlife:	91	Benefits of Community Horticulture:.....	127
Horizontal and Vertical Features:	92	School and Community Projects:	127
Screening and Boundaries:	93	Britain in Bloom:.....	127
.....	93	Horticultural Therapy:.....	128
Ecosystem Services:	93	Social Enterprises:.....	128
Climate Change Mitigation:.....	95	Public Green Space and Communities:	128
Impact of Poor Plant Selection:	96	Community Kitchens within Gardens:.....	129
2.6 Edible Landscapes	97	4. Biodiversity.....	130
Overview of Edible Landscapes:	97	4.1 Plants and Biodiversity.....	130
Growing Systems in Edible Landscapes:	97	Importance of Biodiversity:.....	130
Planting Styles for Edible Landscapes:	99	Food Chains and Webs:.....	130
Allotments:	99	Examples of Plant-Animal Associations:	132
Potager Gardens:	100	Biodiversity and Traditional Attitudes to Weeds and	
Accessible Edibles:	100	Pests:	132
Container Gardens for Edibles:	100	Public Gardens and Biodiversity:	133
Community Gardens:.....	101	Plant Selection and Biodiversity:	133
Community Orchards:	101	4.2 Impact of Climate change.....	135
City Farms:.....	102	Expected Climate Change Trends:.....	135
Patchwork Farms:.....	102	Impacts of Climate Change on Existing Plantings:135	
Edible hedges:	103	Planting for Climate Change Resilient Gardens:137	
Forest Gardening:.....	103	4.3 Creating Habitats.....	143
Guerrilla Gardening:	103	The Importance of Habitats within Gardens: ..143	
Support Structures in Edible Landscapes:	104		
Sustainability of Edible Landscapes:.....	104		
Social Impacts of Edible Landscapes:	107		
Edible Landscapes, Health and Wellbeing:	107		

Creating Different Habitats within Gardens: ...	144
Maintaining Garden Habitats:	151
Benefits of Wildlife to People:.....	151
4.4 Citizen Science and Species Surveys.....	152
What is Citizen Science?	152
Types of Native Species Found in Gardens:....	153
How to identify and Record Garden Wildlife:.	153
Apply Knowledge of Garden Wildlife to Habitat Creation:.....	154
4.5 Biodiversity Action Plans (BAPs)	155
What is a Biodiversity Action Plan?:.....	155
Importance of BAP's to Garden Decision Making:	155
BAPs and Legislation:	158
<i>Essential Information.</i>	<i>159</i>
A. What to expect from the exam and how to prepare.	159
The exams:.....	159
How to prepare for the exams:	160
Before the exam:.....	161
Exam tips:	161
B. Understanding assessment outcomes: A01, A02, A03.....	163
A01: Knowledge	163
A02: Application.....	163
A03: Integration.....	163
C. Qualification-wide outcomes:	165
C1. Health and Safety	165
C2. Sustainability.....	168
C3. Best Practice.....	171
C4. Equality and Diversity	172
<i>Index.....</i>	<i>173</i>