

# **Environmental and Land-based Science**

General Certificate of Secondary Education **GCSE J650**

## **Mark Schemes for the Units**

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**January 2009**

**J650/MS/R/09J**

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Mark schemes should be read in conjunction with the published question papers and the Report on the Examination.

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## B491/01 Plant Cultivation (Foundation Tier)

Question No		Max Mark	
1	wear goggles – spraying pesticide bend knees – lifting a heavy plant put tools away – raking the soil	3	
2	C pests	1	
3	mice; dry rot	2	
4	A pollen is being transferred from the anther of one flower to the stigma of the same flower	1	
5	root R shoot P	2	
6	a	D style	1
	b	holds the stigma up so that it can collect pollen grains / allows <u>pollen tubes</u> to grow to the ovules	1
7	a	melons	1
	b	cucumber	1
8	any two from: organic are natural/not man made; organic can cause smell pollution; organic are harder to apply/bulky; organic do not contain specified quantities of NPK / nutrients; organic improve crumb structure / add humus; organic are cheaper; organic release nutrients more slowly A converse answers R reference to different types of fertiliser	2	
9	a	rhizome;	1
9	b	ginger / asparagus A mint / iris / canna lily	1
10	a	2 marks if all 9 are correct 1 mark if 1 bar is incorrect 0 marks if more than 1 bar is incorrect	2
	b i	20°C A 25°C	1

Question No		Max Mark
b ii	reference to inaccurate temperature / viability of the seeds / other conditions for germination / disease / over or under watering  <b>R</b> human error unless qualified	1
c	outside soil temperatures do not reach this / too expensive indoors / if wait until soil temperature reaches this not enough growing season left.	1
11	a hazard – tripping over fork / stabbing foot / injury to body <b>R</b> any non gardening reference / sharp points	1
	b avoided – put tools away after use / take care when using / wear strong footwear <b>R</b> wellies	1
12	there are two alleles (genes) OWTTE / allele for white is recessive / allele for red is dominant OWTTE; all F1 flowers are red OWTTE <b>R</b> reference to colours or flowers being recessive or dominant	2
13	nitrate/N	1
14	<b>disease free</b> – pathogens (diseases) can be carried by the seeds / plants grown are diseased; <b>collect quickly</b> – before birds eat them / before they are released / before dispersed; <b>dry day</b> – dry seeds store well / damp seeds will rot / dry seeds will not germinate too early	3
15	use of compost / cover lightly with compost; label fully; place in a heated propagator /glasshouse in a seed tray; reference to conditions for germination eg. water sow seeds thinly; cover with glass and paper until germination; when big enough prick out / thin out / transplant them; grow on in pots.	3
16	deep cultivation OWTTE; using a plough / rotavator; surface cultivation / seed bed preparation OWTTE; using a harrow; rolling; fertiliser application; pesticide spraying	3

## B491/02 Plant Cultivation (Higher Tier)

Question No		Max Mark
1	root R shoot P	2
2	C prevents spread of diseases	1
3	A Pollen is transferred from the anther of one flower to the stigma of the same flower.	1
4	D it might result in leaf scorching.	1
5	leaf 4 lack of nitrate leaf 1 vine weevil	2
6	B improves the crumb structure of the soil	1
7	a B genetic mutation	1
	b reduced growth / yield; less chlorophyll; for photosynthesis / less light absorbed / production of sugars;	3
8	a i 2 marks if all 9 are correct; 1 mark if 1 bar is incorrect. 0 marks if more than 1 bar is incorrect	2
	a ii any one outside soil temperatures do not reach this; too expensive indoors; if you wait until soil temperature reaches this not enough growing season left.	1
	b i reference to inaccurate temperature / viability of the seeds / other conditions for germination / disease / over or under watering REJECT human error unless qualified	1
	b ii at temperatures below 15°C enzymes work slowly / enzymes work faster when warmer	1
	b iii at temperatures above 25°C the <b>enzymes</b> are denatured	1
9	no N because legumes can fix N OWTTE; high K for production of peas / fruits / flowers	2
10	holds the stigma up so that it can collect pollen grains / allows <u>pollen tubes</u> to grow to the ovules	1
11	a i 2.82:1	1

Question No		Max Mark
a ii	all F1 are heterozygous; so ratio of 3:1 in F2 ACCEPT annotated punnett square	2
b	random fertilisation / any male gamete can fuse with any female gamete	1
12 a	either: removes sap / sugars; needed for respiration / to provide energy for growth; REJECT take nutrients out of leaves  or: aphids transmit viruses; viruses damage cells	2
12 b	up to 2 marks for hazards: breathing in chemicals; chemicals on skin; eyes; affect other peoples crops up to 2 marks for control measures: make sure no one else is about / not windy / training wear protective clothing / well ventilated area	3
13	a large number of pots / at least 10; all other conditions the same eg. water, temperature, type of plant; give half fertiliser and half nothing measure growth / height / number of flowers etc.	3
14	<b>disease free</b> – pathogens (diseases) can be carried by the seeds / plants grown are diseased; <b>collect quickly</b> – before birds eat them / before they are released / before dispersed; <b>dry day</b> – dry seeds store well / damp seeds will rot / dry seeds will not germinate too early	3

## B492/01 Amenity Horticulture (Foundation Tier)

Question No		Max Mark
1	C Plants have protection from frosts.	1
2	Poinsettia	1
3	C A south facing slope, away from trees.	1
4	electric shock  the grass is slippery	2
5	C naturally occurring organisms controlling the problem	1
6	fertiliser warmth water	3
7	a July	1
	b one example (likely plants to include): Lobelia / Alyssum / Petunia / Geranium (Pelargonium) - Ivy or Zonal / Fuchsia / Impatiens/ Zebrine / Begonia / Nasturtium / Creeping Jenny / Coleus / Campanula  REJECT spring bulbs / shrubs  part 2 is free response – precise suitability of response will be at the discretion of the marker, either common name or latin name will be acceptable	1
8	sweep the path; remove the seed tray (rubbish) on path; put tools away ACCEPT remove stones ACCEPT litter  “tidy up” or “clean up” will only score 1 mark	2
9	rotary mower  REJECT: tractor mower / sit on mower	1
10	2 from: look where they are going / pay attention wear safety boots hold on to the pot send someone ahead as a lookout  ACCEPT tie to trolley ACCEPT use a 4 wheeled trolley REJECT fork lift truck	2



Question No		Max Mark
11	any three from improved flower colour; longer flowering time; disease resistance; earlier / later flowering; uniformity; scent  ALLOW hardiness / appearance / quality / leaf shape ALLOW references to colour range REJECT "bigger"	3
12	a annual the plant completes its life cycle in one year / only lives for one year OWTTE  ALLOW descriptions of the general concept	1
	b to reduce competition for nutrients; minerals; water; light  ALLOW the (remaining) plants to grow to their full size ALLOW concept of space ALLOW cannot be thinned if too small	2
	c 750	1
	d June to October	1
13	a 2 from: excellent pollution tolerance good tolerance of compacted soil good disease resistance	2
	b Chanticleer Pear Ginkgo	2
14	any three from produce point of sale (posters); build an attractive display; put a price on the item; position in an area of high footfall (i.e. entrance or payment point); staff to tell customers about it  ALLOW tidy / dead head	3

Question No		Max Mark
<b>15</b>	two from stronger or less likely to break; fewer glazing bars needed; better insulation or less heat loss; less routine maintenance; weighs less ALLOW safer to work with answers need to include the concept of comparing REJECT cheaper / longer life	<b>2</b>
<b>16</b>	any three from reduction in nutrients; increase in diseases in the soil; build up of pests in the soil; build up of certain weeds  ALLOW soil gets sick ALLOW previous plants may still be present	<b>3</b>

## B492/02 Amenity Horticulture (Higher Tier)

Question No		Max Mark
1	B less mass	1
2	C Plants are only available for specific seasons, not all year. D The range of plants available is smaller than at a nursery.	2
3	C naturally occurring organisms controlling the problem	1
4	four factors from: soil pH / drainage / aspect / shade or exposure / pollution / fragrance / toxic sap or berries; thorns / hardiness / not attractive to harmful insects (1 mark each)  ALLOW concepts of time of interest / architectural shape REJECT size, colour	4
5	B fewer leaves so more even-coloured fruit of better quality F restricting size of trees so picking is quicker	2
6	2 from: look where they are going / pay attention wear safety boots hold on to the pot send someone ahead as a lookout  ACCEPT tie to trolley ACCEPT use a 4 wheeled trolley REJECT fork lift truck	2
7	a	2
	remove 'daughter' bulbs from 'mother' grow on separately will also accept an account of 'scoring' (wounding of basal plate to encourage bulblets to form)  ACCEPT reference to repeating the process in future years	
	b	2
	<i>advantage</i> trueness to type / genetically identical  <i>disadvantage</i> slow to produce large numbers / diseases e.g. viruses also propagated  ALLOW technical difficulty in growing from seed 1 advantage & 1 disadvantage needed REJECT cost	

Question No		Max Mark
8	to reduce competition for nutrients; minerals; water; light  ALLOW the (remaining) plants to grow to their full size ALLOW concept of space ALLOW cannot be thinned if too small	2
9	2 from: permanent plants do not need replacing each year / less work cost less in the long run change in fashion or garden styles  REJECT 'cheaper' unless qualified	2
10	a light supplementary lighting / gro-lux bulb water self-watering (water reservoir) planter irregular temperature background heating at evening & weekends  REJECT space / new pot	1
	b any suitable equipment	1
11	a 2 from: excellent pollution tolerance good tolerance of compacted soil good disease resistance	2
	b Chanticleer Pear Ginkgo	2
12	a at temperatures above 10°C – no upper limit except if above 28° C	1
	b 1 mark given for situation AND reason CO <sub>2</sub> enrichment would not be beneficial at low light levels / low temperature levels response must refer to concept of these limiting factors  ALLOW very high temperatures – ventilation will prevent enrichment economically ALLOW at night	1
13	two from stronger or less likely to break; fewer glazing bars needed; better insulation or less heat loss; less routine maintenance; weighs less ALLOW safer to work with answers need to include the concept of comparing REJECT cheaper / longer life	2

Question No		Max Mark
14	<p><i>advantage</i> (2 from)  destruction of natural habitats;  peat bogs slow to re-form;  fossil fuels used for transportation from other countries as own stocks depleted</p> <p><i>disadvantage</i> (1 from)  replacement products poorer performing; inconsistent;  may use other environmentally damaging materials e.g. coir</p>	3
15	<p>three from:  more flexible working patterns;  less antisocial (weekend, BH) working therefore easier to recruit staff;  easier to follow a growing 'blueprint' if automated / more reliable flowering times;  improved yield / quality;</p> <p>REJECT: cheaper (the cue "saving money" is in the question)  REJECT: 'better' without clarification</p>	3

## B493/01 Management of the Natural Environment (Foundation Tier)

Question No		Max Mark
1	slug – top right; woodlouse – middle right	1
2	X on the river or close to rocks / bank	1
3	A legumes	1
4	B grass giving food for a cow	1
5	B and X	2
6	red orange green blue  (2 right = 1 mark)	2
7	Do not eat when working.; Wash hands after completing work.;	2
8	growing different crops / species / plants; together at same time / in same field;	2
9	any one visual pollution; noise; damage to birds;  ACCEPT TV interference ACCEPT scares wildlife	1
10	not always windy  ACCEPT inefficient conversion, difficulties of storage / getting into grid, low output / will not produce enough	1
11	any two so they do not compete with crops for light; water; minerals; space;  ACCEPT untidy / visual impact / spread all over the place ACCEPT weeds attract plant pests eg slugs	2
12	lets light through;	1

Question No		Max Mark	
13	any idea related to using large machines; eg large machines get job done / no need for hedge maintenance / better crops as no competition with crops / no hedge to harbour pests / more crops grown;	1	
14	a	sandy loam;	1
	b	any two poor drainage or waterlogged; poor aeration; warms slowly; lots of nutrients;  ACCEPT 1 mark for feature of clay eg sticky / makes shapes REJECT particle size	2
15	top heavy / more numbers at top / lack of primary consumers  REJECT unstable, unless qualified	1	
16	a	RSPB	1
	b	RSPB	1
17	heavy pollution around centre (up to 3 miles); light pollution (up to 10 miles) / between 3 and 10 miles, pollution decreasing;  ACCEPT equivalent answers without reference to numerical distance	2	
18	5900      4500      4000      4900 babycorn   bananas   beans      mangetout;  3 for 1 mark, 4 for 2 marks  ACCEPT histograms	2	
19	any 2 crops grown naturally; without artificial fertiliser; without chemical herbicides; without chemical pesticides;  REJECT without chemical unqualified	2	
20	organic definition is a method of farming production / method of producing healthy food; air miles is a different problem / a problem of distribution; organic implies 'eco friendly' food; marketing under such a label is misleading; as food with air miles creates global pollution / increases carbon emissions; (one of either <i>for</i> or <i>against</i> and one other)	3	

Question No		Max Mark
21	any 3 maintains character of countryside; historical / archaeological interest of past farming; wildlife benefit eg bat roost; rebuild / use as future alternative enterprises; listed; in current use;	3



## B493/02 Management of the Natural Environment (Higher Tier)

Question No		Max Mark						
1	Do not eat while working.; Wash hands after completing work.;	2						
2	A = nitrogen gas; B = nitrate;	2						
3	<b>decrease calcium</b>  both correct for 1 mark	1						
4	<b>C</b> oxygen	1						
5	<b>D</b> reduces oxygen levels	1						
6	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 50%; text-align: center;">grow on clay or loam soil  canopy lets in 20% of light  rich ground flora</td> <td style="width: 50%; text-align: center;">grow on poor sandy soils  acidic leaf litter  moss and lichens common</td> </tr> <tr> <td style="text-align: center;">hazel oak</td> <td style="text-align: center;">pine spruce</td> </tr> <tr> <td style="text-align: center;">blackberry</td> <td style="text-align: center;">bilberry</td> </tr> </table> 6 lines correct = 3 marks; 5/4 lines = 2; 3/2 lines = 1 mark;	grow on clay or loam soil  canopy lets in 20% of light  rich ground flora	grow on poor sandy soils  acidic leaf litter  moss and lichens common	hazel oak	pine spruce	blackberry	bilberry	3
grow on clay or loam soil  canopy lets in 20% of light  rich ground flora	grow on poor sandy soils  acidic leaf litter  moss and lichens common							
hazel oak	pine spruce							
blackberry	bilberry							
7	a	many kept on less land / land free for other use / less damage to ecosystem	1					
	b	any one more than one per cage now the norm; welfare considerations improved; public more aware; animal rights now an issue;  REJECT ref to cruel / spreads diseases / not natural	1					
8	a	sandy loam	1					

Question No		Max Mark	
b	any two poor drainage or waterlogged; poor aeration; warms slowly; lots of nutrients;  ACCEPT 1 mark for feature of clay eg sticky / makes shapes REJECT particle size	2	
9	become eroded / blow outs occur / surface humus blows away / plant growth disturbed  REJECT answers that do not refer to habitat	1	
10	top heavy / more numbers at top / lack of primary consumers;  REJECT unstable unless qualified;	1	
11	warmer winters = more rats / stoats (ground predators) to eat eggs / chicks; flooding = loss of nests / chicks;	2	
12	choice either – allotments / public gardens / leave as it is; appropriate reasons would provide a variety of physical conditions for a variety of plants ; which support a variety of animals;	3	
13	5900      4500      4000      4900 babycorn   bananas   beans                   mangetout  3 for 1 mark, 4 for 2 marks.  ACCEPT histogram	2	
14	a	C 50%	1
	b	(20) 100 to 150 (250);	1
	c i	they rise to a maximum and then fall over similar distances  ACCEPT curves broadly same shape OWTTE	1
	c ii	as oxygen decreases, bacteria increase and when oxygen increases, bacteria decrease;  ACCEPT curves mirror images / opposite of each other	1
15		fast flow causes pollutants to be dispersed / diluted more quickly; oxygen levels boosted by increased absorption from air / greater area of water in contact with air;	2

Question No		Max Mark
16	<p>organic definition is a method of farming production / method of producing healthy food;            air miles is a different problem / a problem of distribution;            organic implies 'eco friendly' food;            marketing under such a label is misleading:            as food with air miles creates global pollution / increases carbon emissions;            (one of either <i>for</i> or <i>against</i> and one other)</p>	3
17	<p>level of response:  <b>3 marks</b> - detailed analysis to include:            quoted facts on power provided / quoted facts on cut in CO<sub>2</sub> emissions;            the need for clean energy outweighs the local damage to environment / problems with nuclear;            if global warming is not tackled the habitats won't survive / flooding will happen any way;  <b>2 marks</b> - any two of the above in general terms eg energy production high and benefits out weigh environmental issues, example given;  <b>1 mark</b> - any one of the above in general terms eg a lot of electricity produced so no need for nuclear;</p>	3

## B494/01 Care of Animals (Foundation Tier)

Question No		Max Mark	
1	D hunting	1	
2	B cat	1	
3	B to digest cellulose	1	
4	guinea pig; rabbit;	2	
5	a	D fearful of leaving owner	1
	b	B 55	1
6	E wash his hands	1	
7	G wild rodents and rabbits	1	
8	a	D Yorkshire Terrier	1
	b	any one minimal exercise; small; likes much human contact; OWTTE	1
9	any two bird has shell gland; bird does not have uterus / womb; bird has only one oviduct / right oviduct not developed / only one ovary; bird has cloaca / vent / does not have vagina;	2	
10	any one bacterium parasite fungus named example	1	
11	so spider does not get hurt / escape; so Sam does not get hurt;	2	
12	Manx – no tail;  Siamese – coloured points / description / blue eyes / slim body; ACCEPT very short fur  Persian – long fur / squashed face; ACCEPT fluffy	3	

Question No		Max Mark
13	select cats with named characteristic; breed these together; over several generations; repeatedly cross young with best features;	3
14	protein – growth / repair of tissues;  fat – energy store / insulation / protection (of organs);  carbohydrate – energy;	3
15	water bottle (no mark)  water cannot get contaminated with waste / bedding / dish cannot be turned over;	1
16	a <i>there will be a range of acceptable answers including:</i> rabbit / hamster / guinea pig / gerbil / rat / cat / dog (no mark for this)  answer will depend on animal chosen but could include a range of fruits or vegetables, tinned food or named food; (mark only awarded if food given is suitable for animal named)	1
	b moisture content;	1
17	£470 = 2 marks  else evidence of correct methodology = 1 mark	2
18	<i>there will be a range of acceptable answers depending on animal named including:</i>  check mouth for sores / teeth; check anus; check fur / feathers / scales for parasites; check skin for sores / wounds; check ears / eyes for discharge; check feet for sores / nails / claws in good condition; check weight; coat condition;	3
19	any three dry scruffy coat; loss of fur; itching / scratching; anaemic; infected skin / sores; poor immune system / easily gets infections; nits / droppings <u>in fur</u> ;	3

## B494/02 Care of Animals (Higher Tier)

Question No		Max Mark	
1	a	C 22	1
	b	B 12	1
2		B 54	1
3		G wild rodents and rabbits	1
4		A They are essential in the diet.	1
5		A causes ovulation	1
6		A It has a diet of cellulose.	1
7		B	1
8	a	select cats with named characteristic; breed these together; over several generations; repeatedly cross young with best features;	3
9		£470 = 2 marks  else evidence of correct methodology = 1 mark	2
10		any three dry scruffy coat; loss of fur; itching / scratching; anaemic; infected skin / sores; poor immune system / easily gets infections; nits / droppings <u>in fur</u> ;	3
11		C Himalayan	1
		any 1 (reason + explanation for 2 marks) Himalayan has short fur so easy to groom; Angora has long fur so hard to groom; Himalayan small so easy to handle; Flemish giant so hard to handle; Himalayan calm so easy to tame; Netherlands nervous so hard to tame;	2
12		any 3 development of teeth / bones / shell / beak; for muscle contraction; for blood clotting; for nerve function;	3

13	a	<p><i>there will be a range of acceptable answers including:</i>  rabbit / hamster / guinea pig / gerbil / rat / cat / dog (no mark for this)</p> <p>answer will depend on animal chosen but could include a range of fruits or vegetables, tinned food or named food;  (mark only awarded if food given is suitable for animal named)</p>	1
	b	moisture content	1
14		any 3 identify risk; estimate likelihood of risk occurring; estimate seriousness of risk; plan action to reduce risk;	3
15		being fearful of new situations	1
16	a	a form of inbreeding; maintains relationship with ancestor / relative eg more likely to get desired characteristics; OWTTE	2
	b	any two may lead to the expression of recessive alleles; 'bad' characteristics may show; increase deformities; loss of hybrid vigour;	2
17		if only Capstar used, the eggs already laid will hatch; If only Sentinel is used then adults could lay more eggs;	2
18		<b>F</b> handling; <b>N</b> water consumption;	2

## B495/01 Livestock Husbandry (Foundation Tier)

Question No		Max Mark	
1	C	1	
2	B hens	1	
3	A conformation	1	
4	a	A breed-type	1
	b	computer or appropriate application within	1
5	B 30	1	
6	B legs bent and back straight	1	
7	B Salmonella	1	
8	C It is an easy process to carry out on the farm.	1	
9	B	1	
10	X to be placed over the ovary	1	
11	<p>clean; dry; draught free; adequate ventilation; warm; adequate lighting; secure food, water, bedding</p> <p>6 points 3 marks 4 points 2 marks 2 points 1 mark</p>	3	
12	<p>any one babies in wrong position; babies or mother not well; babies too large for mother; too many babies; young mother;</p> <p>REJECT baby stuck without qualification</p>	1	



Question No		Max Mark	
13	any two dull coat breathing problems sunken / runny eyes change in behaviour scours listless weight loss	2	
14	the animal might stand on your foot and the steel toe cap would help protect your foot OWTTE	1	
15	any three dairy / beef breed (no mark) colour; any breed specific characteristic	3	
16	(any farm animal - no mark) any two bulling; swollen vulva; discharge from vulva; restless; male attention; any breed specific signs	2	
17	<b>A</b> Penis – to carry sperm inside the female <b>B</b> Sperm Duct – to carry sperm to the penis <b>C</b> Testis – to produce sperm  both name and function for each mark	3	
18	any three talk quietly; no sudden movements; make sure the animal knows you are there; move to where it can see you; don't go in on your own; OWTTE	3	
19	mother is likely to be protective of her calves; there are more animals involved OWTTE  ACCEPT animals facing away	2	
20	a	20	1
	b	November	1
	c	2	1
21	a	1.5	1
	b	9	1

## B495/02 Livestock Husbandry (Higher Tier)

Question No		Max Mark
1	B pelleted concentrate	1
2	A breed-type	1
3	216 kg	1
4	D protein	1
5	A in the first few days	1
6	D increased variety of genotypes	1
7	B Salmonella	1
8	C It is an easy process to carry out on the farm.	1
9	B 30	1
10	A cattle	1
11	any two regular stops; feed or water breaks for the animal; movement documentation; the driver to be qualified; suitable vehicle; healthy animals;	2
12	to calibrate the scale / check they were weighing accurately with <u>something of known mass</u> OWTTE	1
13	a enables the farmer to check the animal is well and growing normally OWTTE	1
	b tells the farmer when the animal is at the optimum weight for sale not feeding beyond that time	1
14	any two less manual handling; cannot kick you; less likely to slip with the knife; animal less stressed; less likely to be hurt;	2

Question No		Max Mark
15	<p><b>A</b> Penis – to carry sperm inside the female  <b>B</b> Sperm Duct – to carry sperm to the penis  <b>C</b> Testis – to produce sperm</p> <p>both name and function for each mark</p>	3
16	<p>clean;  dry;  draught free;  adequate ventilation;  warm;  adequate lighting;  secure  food, water, bedding</p> <p>6 points 3 marks  4 points 2 marks  2 points 1 mark</p>	3
17	if the cow is not in season AI wasted / cost time implications / loss of milk / more eggs available	1
18	babies in wrong position, babies or mother not well, babies too large for mother, large no of babies, young mother, reject baby stuck without qualification	1
19	<p>the animal is breathing / standing / feeding / no physical injuries / that the mother is accepting the baby / number of babies</p> <p>REJECT weigh</p>	3
20	a prevents the sow harming the piglets / squashing / treading on	1
	b the sow is restricted and cannot behave in a "normal way" NOT 'it's cruel' or any other subjective answer	1
21	a 24	1
	b October to July	1
	c 22	1
22	a 10 ALLOW 10-25	1
	b 6	1
	c 1.5	1

# Grade Thresholds

General Certificate of Secondary Education  
Environmental and Land-based Science (Specification Code J650)  
January 2009 Examination Series

## Component Threshold Marks

Component		Max Mark	A*	A	B	C	D	E	F	G
B491/01	Raw	36				25	21	18	15	12
	UMS	34				30	25	20	15	10
B491/02	Raw	36	27	23	19	16	13	11		
	UMS	50	45	40	35	30	25	20		
B492/01	Raw	36				25	21	18	15	12
	UMS	34				30	25	20	15	10
B492/02	Raw	36	30	26	22	18	14	12		
	UMS	50	45	40	35	30	25	20		
B493/01	Raw	36				23	19	15	12	9
	UMS	34				30	25	20	15	10
B493/02	Raw	36	30	26	22	18	15	13		
	UMS	50	45	40	35	30	25	20		
B494/01	Raw	36				26	22	19	16	13
	UMS	34				30	25	20	15	10
B494/02	Raw	36	33	29	25	21	18	16		
	UMS	50	45	40	35	30	25	20		
B495/01	Raw	36				28	24	21	18	15
	UMS	34				30	25	20	15	10
B495/02	Raw	36	33	30	27	24	19	16		
	UMS	50	45	40	35	30	25	20		

**There were no candidates aggregating this series.**

Statistics are correct at the time of publication.

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