



GEOGRAPHY

2217/23

Paper 2 Investigation and Skills

May/June 2017

MARK SCHEME

Maximum Mark: 90

Published

This mark scheme is published as an aid to teachers and candidates, to indicate the requirements of the examination. It shows the basis on which Examiners were instructed to award marks. It does not indicate the details of the discussions that took place at an Examiners' meeting before marking began, which would have considered the acceptability of alternative answers.

Mark schemes should be read in conjunction with the question paper and the Principal Examiner Report for Teachers.

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Section A

Question	Answer	Marks
1(a)(i)	414781	1
1(a)(ii)	Golf course / links	1
1(b)	Named river (Dhoo, Glass, Baldwin, Ballacottier, Sulby, Greeba) Named or located reservoir Desalination of seawater	2
1(c)(i)	4	1
1(c)(ii)	Embankment Cuttings Bridge / goes <u>over</u> B26 / secondary road / river } <u>crosses</u> any = 1 Goes <u>under</u> A25 / main road / minor road } Through non coniferous wood / mixed wood Follows river / valley Passes farm / buildings Crosses farmland Appropriate compass directions (Max 2)	6
1(d)	Both have main / A roads / other roads B has secondary / B roads but A does not Both have the TT course A has curved roads and B is mainly straight roads A has lots of dead ends and B roads mainly interlink	3
1(e)	High / hill / mountain Heights to 479 m Lowest 160 m Steep slopes Uniform slopes Rounded top / gentle on top Ridge / spurs Valleys Radial drainage Source on hill slope Drains to NW, S, SE, SW / W (2 of these) Tributaries joining (Reserve 1 for each of relief / drainage)	6

Question	Answer	Marks
2(a)	Correct plot on Fig. 3	1
2(b)(i)	100 000	1
2(b)(ii)	30–34	1
2(c)(i)	Pyramid narrows at base Less in 0–4 than 5–9 group in both years Less in 5–9 than 10–14 / less in 10–14 than 15–19 in 2010 Less 0–4 / young dependents in 2010 than 2000	1
2(c)(ii)	Increase in death rate / reason for increase in death rate Out migration	2
2(c)(iii)	More females live longer than males More females than males in older groups / above 35 (2010) / above 25 (2000)	2

Question	Answer	Marks
3(a)(i)	A	1
3(a)(ii)	B	1
3(a)(iii)	A	1
3(b)(i)	Narrow / small houses Same design Terraced / joined together / dense Two storey Rows / on straight roads / linear Bay windows / windows stick out Chimneys No gardens / yards / outside space Electric / telephone connections Red brick / painted cream / white	2
3(b)(ii)	Gardens / trees / green areas Off-road parking / garages Big houses More space Detached / semi-detached houses New / modern construction	3

Question	Answer	Marks
4(a)	Correct line on Fig. 4	1
4(b)(i)	North-east South (Two small areas in) centre / SE of Hunsur	2
4(b)(ii)	Sunshine recorder	1
4(c)	Sunny intervals now Thicker / darker cloud Rain / showers Fall in temperature	2
4(d)(i)	3	1
4(d)(ii)	Lower than rest of the year Lowest	1

Question	Answer	Marks
5(a)(i)	50 m–52 m	1
5(a)(ii)	To reach sunlight Stability in wet soil / better support for tall tree	2
5(a)(iii)	Canopy is higher / under canopy is lower Canopy is more continuous / denser / more leaves Canopy has wider tops / crowns	2
5(a)(iv)	Shaded Canopy fully covers ‘ blocks sunlight	1
5(b)	Previously cleared area <ul style="list-style-type: none"> • No (big) trees to cut down / only small veg to remove • Quicker to get crops planted / less preparation needed New clearing <ul style="list-style-type: none"> • Soil will be more fertile / have better structure • Burning trees will supply fertiliser to soil 	2

Question	Answer	Marks
6(a)	Non renewable Fossil fuel	2
6(b)(i)	Completion of graph for Iran	1
6(b)(ii)	Venezuela	1
6(b)(iii)	UAE	1
6(c)	Most / 5 in Middle East / 6 in Asia 2 in Africa 1 in North America 1 in South America All north of Equator	3

Section B

Question	Answer	Marks
7(a)(i)	A: source B: confluence	2
7(b)	Agree methodology on what measurements to take Find out what doesn't work / change it / avoid mistakes Practise fieldwork techniques / learn how to do Test / learn how to use equipment Experience of working as a team / team organisation Find out how long to allocate each task	2
7(c)	Width of channel: Stretch tape measure across river / from bank to bank / side to side Keep tape measure taut / horizontal / stretched / tight Measure perpendicular / at right angles to banks / straight across / directly opposite Measure where tape touches the bank Depth of river: Rest ruler on river bed / bottom Measure vertically / perpendicular to surface Measure where water level is / wet part of ruler Measure at equal points / 25–30 cm across channel	4
7(d)(i)	Completion of cross section and shading 0.5 m at 2.9 m, 0.35 m at 4.2 m 1 mark for each plot and no credit for shading	2
7(d)(ii)	Site 4	1
7(d)(iii)	Hypothesis is true / partially true / mainly true / except for – 1 mark reserve (✓HA) If true – no credit for anomaly If partially true – reserve 1 mark for anomaly Two marks for supporting data – need 2 site numbers and 2 measurements Wider: 1.2 m at site 1 to 12.4 m at site 5 / increases by 11.2 m (credit any 2 sites) Deeper: 0.2 m at site 1 to 0.6 m at site 5 / increases by 0.4 m (credit any 2 sites) Anomaly between sites 4 and 5 – depth is 0.9 m at site 4 and 0.6 m at site 5	3
7(e)(i)	Classification is subjective / based on student judgement Classes of pebbles are very similar / hard to distinguish between classes	1
7(e)(ii)	Pebbles selected may not be typical of the pebbles at that site / bigger than other pebbles / smaller than other pebbles / anomalies / not representative All pebbles may have been taken from same area of river bed / not across river channel / areas missed out Not a fair / reliable sample / bias / student preference	2

Question	Answer	Marks
7(e)(iii)	Completion of divided bar graph for site 2: Very angular = 9, angular = 4, slightly angular = 6, slightly rounded = 1 2 marks for dividing lines, 1 mark for shading	3
7(e)(iv)	Slightly angular = 12, slightly rounded = 24, rounded = 14, very rounded = 2 (Do not need 0 in very angular and angular)	1
7(e)(v)	Total score decreases from sites 1 / 2 to sites 4 / 5 Sites 2 / 5 are anomalies – higher score than previous site Very angular pebbles only found at sites 1 and 2 / not found at sites 3, 4 and 5 Rounded / very rounded pebbles only found at sites 3, 4 and 5 / not found at sites 1 and 2 Credit 2 marks max (not reserve) for paired data based on total scores , e.g. Site 1 = 94 and site 5 = 63 to agree with conclusion Site 1 = 94 and site 2 = 101 to explain partly true / anomaly	3
7(e)(vi)	Erosion / pebbles crash into each other / pebbles crash into bed or banks / collide with each other Attrition Longer duration of transport / longer time to be eroded / been in river longer / water smooths pebbles as they go downstream	2
7(e)(ii)	Completion of isoline Line must go between sites 3 and 8 and join up with existing isoline	2
7(f)(i)	Callipers	1
7(f)(ii)	Measure long axis / length of pebble Repeat size measurements to check accuracy / another student checks measuring Sample / measure several / 2–20 pebbles at each site and calculate average of measurements Use same sites 1–5 / sites downstream / select new sites / sites equal distance apart Use systematic sampling / pick pebbles across width of river No reserve mark for method or reliability	3
	Total:	30

Question	Answer	Marks
8(a)(i)	Questionnaire is for tourists / only wanted to ask tourists / to see if they are tourists Not waste people's time / if not a tourist no need to continue If include non-tourists results will be unreliable / contain wrong information / inaccurate / irrelevant Some people they ask will not be tourists / eliminate residents	2
8(a)(ii)	Systematic	1
8(a)(iii)	Easy / quick method to undertake / don't need random numbers / don't need knowledge of population to be sampled Will not be biased / will be reliable / will be fair	2
8(b)(i)	Plot China = 16 and USA = 10 on Fig. 6 Must point in direction of Bagan	2
8(b)(ii)	Map: Shows direction of movement Gives information about distribution / pattern of countries Shows which area of world / where tourists come from / location Shows distance / how far tourists travel Bar graphs: Easy to see number / how many / exact figure Easy to rank / see the order of importance / analyse Easy to compare different countries / values Separates Asian and non-Asian countries	2
8(b)(iii)	Hypothesis is true – 1 mark reserve 64(%) come from Asia / 28 more from Asia Two largest source countries are in Asia / Thailand and China / most come from Thailand and China Credit 1 mark (not reserve) for accurate data to compare two bar graphs, e.g. 16 come from China / Thailand and 10 come from USA 16 come from Thailand and less than 10 from all countries outside Asia In Asia highest number is 16 and outside Asia highest number is 10	3
8(c)(i)	Plotting over 60 categories on histogram: Cultural and heritage = 19 People and traditions = 7 –1 mark if incorrect or no shading	2

Question	Answer	Marks
8(c)(ii)	<p>Hypothesis is false / no / not supported – 1 mark reserve (✓HA) People in different age groups visit for the same reasons (Main) attraction for people of all age groups is cultural and heritage sites (Second) attraction for all age groups is people and their traditions Other reasons / balloon rides / hot weather / restaurants and nightlife are unimportant for all age groups</p> <p>Credit 1 mark max for supporting statistics from at least two age groups e.g. 15 from 21–40 and 19 from over 60 visit cultural and heritage sites 1 from 0–20, 1 from 21–40, 0 from over 40 visit restaurants</p>	4
8(d)(i)	<p>Complete pie graph for Thailand Plot 'people' = 19% and 'travel agent' = 37% 1 mark for dividing line, 1 mark for shading</p>	2
8(d)(ii)	<p>More people used travel agent in China More people used internet in Japan Most use travel agent in China and most use internet in Japan Credit 'only' with statistics</p>	2
8(e)(i)	<p>Advantages (to 3 marks maximum) Brings money into the area / economy / increase GDP / sell to tourists / tourists buy products Creates jobs for local people / e.g. of job Local people experience cultures from other countries / share culture / local traditions across the world / preserves local culture Improves local services / public transport / health / education Locals can use tourist facilities / services Multiplier effect</p> <p>Disadvantages (to 3 marks maximum) Disturbance to local people / noise Traffic congestion Tourists don't respect local culture / alcohol / drugs / religious issues / racial tension / prostitution Tourist hotels / development take up farmland / knock down houses Hotels spoil the view Tourist industry uses scarce resources / water / electricity Air pollution / water pollution / waste / litter from tourist developments Seasonal jobs Increased price of goods / property Loss of privacy</p> <p>Reserve 2 marks for advantages / disadvantages</p>	5

Question	Answer	Marks
8(e)(ii)	<p>1 mark for topic being investigated e.g. Water pollution Litter Decrease in vegetation</p> <p>1 mark for how it is being investigated e.g. Bi-polar analysis Quadrat Litter count Species identification Comparing photographs Environmental index</p> <p>1 mark for development of method with clear focus on natural environment e.g. Generic ideas about grouping, time of day, checking methodology Specific details of method</p>	3
	Total:	30