TEMASEK JUNIOR COLLEGE 2023 JC1 H2 GEOGRAPHY WEIGHTED ASSESSMENT 2

Cluster 2 Structured Question

Flooding in Bangladesh

1 Resource 1 shows a hydrograph for two rainfall events. Resource 2A shows rainfall levels in Bangladesh in July 2004 and Resource 2B shows the relief of Bangladesh. Resource 3 shows the aftermath of a flooding event in Dhaka, Bangladesh.

(a)	Using Resource 1, describe the differences in the hydrograph for the two rainfall events.	[5]
(b)	Suggest reasons for the differences in the hydrograph for the two rainfall events shown in Resource 1.	[3]
(c)	Describe the pattern of rainfall levels in Bangladesh as shown in Resource 2A.	[3]
(d)	With reference to Resources 2A and 2B, explain the regular occurrence of floods in Bangladesh.	[6]
(e)	Using Resource 3, suggest reasons why the effects of floods on people are likely to be varied.	[6]
(f)	Explain three strategies that can be used to manage fluvial floods.	[7]

Resource 1 for Question 1

A hydrograph for two events



Resource 2A for Question 1 Rainfall levels in Bangladesh in 2004



Resource 2B for Question 1 Relief in Bangladesh



Resource 3 for Question 1 Aftermath of a flooding event in Dhaka, Bangladesh



Cluster 2 Structured Question				
Flooding in Bangladesh				
1	Resource 1 shows a hydrograph for two rainfall events. Resource 2A shows rainfall lev Bangladesh in July 2004 and Resource 2B shows the relief of Bangladesh. Resource 3 show aftermath of a flooding event in Dhaka, Bangladesh.	els in vs the		
(a)	Using Resource 1, describe the differences in the hydrograph for the two rainfall events.	[5]		
	 Credit 1 mark per point; credit 1 mark for each additional points Lag Time for 1st event is shorter Overall discharge volume Peak Discharge – Peak discharge for 1st event is lower Rising Limb is steeper for the 1st storm event 2nd storm event's falling limb is steeper compared to 1st storm event. 	AO2		
(b)	Suggest reasons for the differences in the hydrograph for the two rainfall events shown in Resource 1.	[3]		
	Award a maximum of 1 and one additional mark for further development.	AO2		
	 Antecedent soil moisture after the first storm has resulted in soil moisture storages being overwhelmed Throughflow and baseflow from the first rainstorm may still be reaching the channel, contributing to the overall discharge storm flow Intensity of storm might be lower for 2nd storm 			
(c)	Describe the pattern of rainfall levels in Bangladesh as shown in Resource 2A.	[3]		
	 Award 1 mark for a description of the rainfall pattern. Award a maximum of 1 additional mark for further development of each description, where applicable. Highest rainfall of 320mm at the coastal margins in South-East Bangladesh Rainfall totals decreases towards the central and southern parts of the country Lowest rainfall totals in the centre part of South Bangladesh. Rainfall is the highest on the Northeastern of Bangladesh. 	AO2		
(d)	With reference to Resources 2A and 2B, explain the regular occurrence of floods in Bangladesh.	[6]		
	Award 1 mark for each explanation with reference to the resource. Award a maximum of 1 additional mark for further development of the explanation, where applicable.	AO2		
	 Large drainage basin and the overall discharge is contributed by major rivers Monsoonal rains during the summer season 			

	Low-lying relief making it prone to storm surges and coastal flooding	
	High relief in the upper course of India and Bangladesh and summer melt waters	
(e)	Using Resource 3, suggest reasons why the effects of floods on people are likely to be varied.	[6]
	Award 1 mark for each explanation. Award a maximum of 1 additional mark for further development of the explanation, where applicable.	A02
	 Level of development and income levels Social groups and differing vulnerability levels, e.g. children and teenagers as well as the elderly 	
	 Differing access to varied transport infrastructure Lower-level residents and businesses and upper-storey residents 	
(f)	Explain three strategies that can be used to manage fluvial floods.	[7]
	Any <u>three</u> hard-engineering or soft-engineering strategy is acceptable as long as it is properly identified and logically explain how the strategy helps to prevent floods or minimise hazard risk exposure.	AO1