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Environmental systems and societies
Higher level
Paper 1

30 April 2026

Zone A afternoon | **Zone B** afternoon | **Zone C** afternoon

Session number

2 hours

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Instructions to students

- Write your session number in the boxes above.
- Do not open this examination paper until instructed to do so.
- Answer all questions. Refer to the resource booklet which accompanies this question paper.
- Answers must be written within the answer boxes provided.
- A calculator is required for this paper.
- The maximum mark for this examination paper is **[70 marks]**.



Answer **all** questions. Answers must be written within the answer boxes provided.

1. (a) With reference to **Figure 1(d)**, identify the warmest month in the Corbières-Fenouillèdes Natural Park. [1]

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- (b) With reference to **Figure 1(d)**, identify the 20-year mean rainfall for July. [1]

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2. Using **Figure 1(e)** and **Figure 1(f)**, identify **two** factors which make the Corbières-Fenouillèdes region important for conservation. [2]

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3. (a) Using **Figure 1(g)**, state **two** environmental impacts of wine production in the Corbières-Fenouillèdes Natural Park. [2]

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- (b) Suggest **one** method by which carbon footprints and **one** method by which water footprints could be lowered during wine production. [2]

Carbon footprint:	
Water footprint:	



4. (a) With reference to **Figure 2(c)**, describe how anoxic conditions in summer can develop in the river Agly due to low water levels and lack of rain in the winter. [3]

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- (b) With reference to **Figure 2(a)**, **Figure 2(b)** and **Figure 2(c)**, outline **three** ways in which water quality could be measured in Lac sur l'Agly. [3]

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- (c) With reference to **Figure 2(c)**, explain how continued drought and low water levels in the river Agly may affect its recreational value. [3]

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(This question continues on the following page)



(Question 4 continued)

- (d) Identify **one** advantage and **one** disadvantage of the construction of the dam on the river Agly.

[2]

Advantage:	
Disadvantage:	



5. (a) With reference to **Figure 2(f)**, state in which month the ground aquifer at Le Barcarès had the highest level of water scarcity.

[1]

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- (b) With reference to **Figure 2(c)** and **Figure 2(f)**, outline **two** reasons why the region of the ground aquifer at Le Barcarès may experience water stress, but its population may not be experiencing water scarcity.

[3]

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- (c) Evaluate the sustainability of water resources in the Corbières-Fenouillèdes Natural Park and its nearby urban area.

[6]

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6. (a) (i) With reference to **Figure 3(a)**, identify the year in which the rural population fell below 15 million for the first time. [1]

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- (ii) Using **Figure 3(a)**, state the size of France's urban population in the year you identified in part (a)(i). [1]

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- (b) Using **Figure 3(a)**, calculate the depopulation rate from rural France between 1960 and 1970. [1]

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- (c) If the current rate of rural depopulation continues, estimate the probable size of the rural population in France in 2030 to the nearest 50 000. [1]

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- (d) With reference to **Figure 3(b)**, describe how the rate of adult employment in agriculture in rural France has changed since 1960. [3]

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7. With reference to **Figure 3(c)** and **Figure 3(d)**, explain how agricultural production increased between 1961 and 1980, even as the number of people employed in agriculture decreased. [4]

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8. (a) With reference to **Figure 3(e)** and **Figure 3(f)**, identify the abiotic factors and the biotic process which limits the number of plant species in the closed-canopy climax forests of the Corbières-Fenouillèdes Natural Park. [2]

Abiotic factor:	
Biotic process:	

- (b) With reference to **Figure 3(e)**, describe how you would compare the plant biodiversity of the pasture grassland on gentle slopes with the garrigue scrub on medium slopes. [4]

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9. (a) With reference to **Figure 3(f)** and **Figure 3(g)**, identify the directional process of change from pasture grassland to closed-canopy climax forest when domestic animals are removed from the ecosystem. [1]

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- (b) With reference to **Figure 3(f)**, **Figure 3(g)** and **Figure 3(h)**, explain how human activity has contributed to the formation of the pasture grassland community as a plagioclimax in the upper valley of the river Agly. [3]

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10. Through the lens of economics, suggest how rural depopulation could lead to a significant loss of biological diversity in the mountain valleys of the Corbières-Fenouillèdes Natural Park. [6]

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11. (a) With reference to **Figure 4(b)**, the Egyptian vulture is categorized as part of the detritivore food chain. Define detritivore.

[1]

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- (b) With reference to **Figure 4(b)** and **Figure 4(c)**, outline **two** of the criteria used to assess the Egyptian vulture as critically endangered in its European range.

[2]

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- (c) With reference to **Figure 4(b)**, describe how increased use of pesticides on crops since 1945 can lead to poisoning of the Egyptian vulture.

[3]

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12. (a) With reference to **Figure 4(b)** and **Figure 4(c)**, outline **two** reasons why the realized niche of the Egyptian vulture reduces competition with other vulture species found in the Corbières-Fenouillèdes Natural Park.

[2]

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- (b) With reference to **Figure 4(b)** and **Figure 4(d)**, outline why significant falls in the populations of Egyptian vultures occurred in France in 1994 and 1997.

[2]

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13. Explain how the categorization of the Egyptian vulture as critically endangered in Europe is recognized at different levels of national and local agreements within the Corbières-Fenouillèdes Natural Park.

[4]

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