Living World

1. What is transferred through a food web? (1 mark)

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2. Outline how consumers are linked together in a food chain. (2 marks)

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3. Why are decomposers important within an ecosystem? (2 marks)

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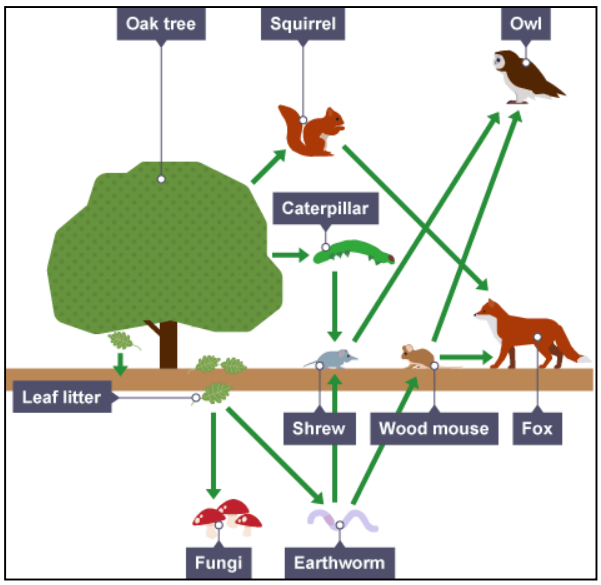
4. Study Figure 1 showing organisms within a food web.

Figure 1



Identify examples of the following components of the ecosystem in Figure 1

a) Producer _____ (1 mark)

b) Decomposer _____ (1 mark)

c) Consumer _____ (1 mark)

5. Outline one factor which could cause an imbalance between the components of an ecosystem (2 marks)

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6. With reference to Figure 1, outline how the balance of the ecosystem could change if disease caused the number of caterpillars to decline suddenly. (2 marks)

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7. With reference to Figure 1, outline how the balance of the ecosystem would change if more squirrels were introduced to the ecosystem shown. (2 marks)

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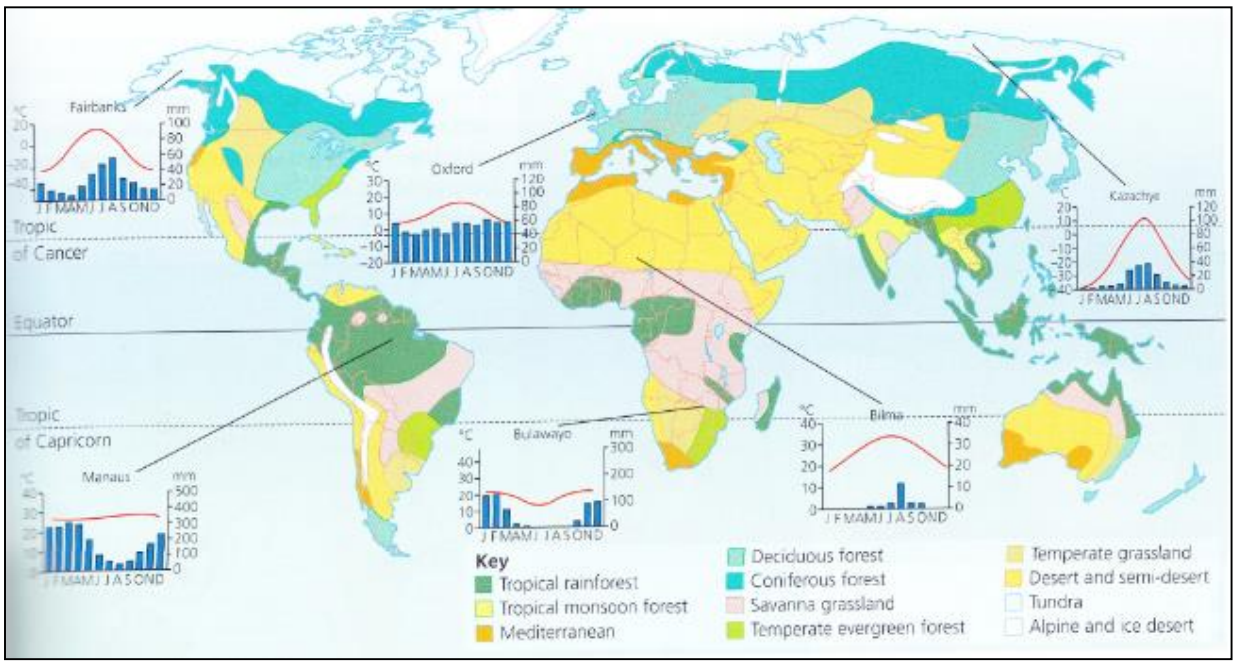
8. Study Figure 2 showing the world's global ecosystems

Figure 2



8. Using Figure 2, describe the distribution of desert and semi desert regions. (2 marks)

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9. With reference to Figure 2, describe the climate of tundra regions (2 marks)

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10. Which statement best describes the characteristics of temperate deciduous forests? (1 mark)

a) The vegetation is evergreen because the climate is warm all year round ○

b) The trees drop their leaves in the winter because of the onset of cold weather ○

c) Vegetation is sparse because there is a lack of rainfall ○

d) High temperatures mean that vegetation is sparse and leaves are small and waxy ○

11. Complete the paragraph by using Figure 2 to complete the missing words: (5 marks)

In the northern hemisphere, large scale ecosystems include Alpine and ice desert and _____. At lower latitudes in the northern hemisphere, deciduous and _____ forests occur because temperatures are _____ for example, in tundra regions like Fairbanks, in July temperatures reach 18 degrees C whereas in deciduous forest areas, temperatures reach _____ degrees C. The hottest regions are areas of desert and semi desert for example, in _____ temperatures reach 35 degrees C.

12. Which of the global natural ecosystems occurs on 3 continents following the line of the equator?

_____ (1 mark)

13. Study Figure 3 which shows rainforest wildlife

Figure 3

With reference to Figure 3 and your own knowledge, explain how wildlife has adapted to conditions in tropical rainforests. (4 marks)

14 Study Figure 4 which shows a tropical rainforest soil

Figure 4

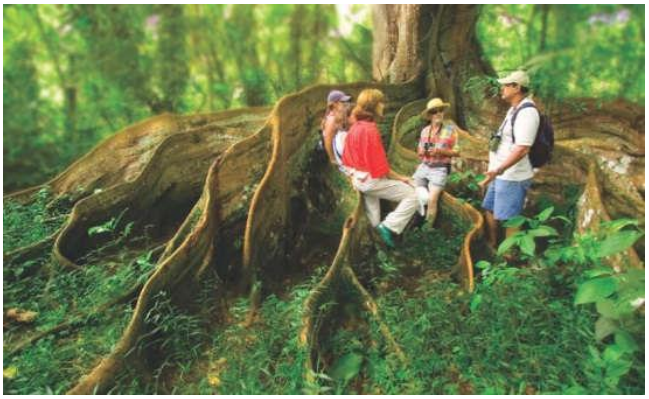
14. Using Figure 4 to help you, explain how tropical rainforest vegetation affects the soils that form there. (4 marks)

15. Explain how the climate affects the characteristics of tropical rainforest soils. (4 marks)

16. Outline how people are dependent upon the tropical rainforest (2 marks)

17. Study Figure 5, a buttress root

Figure 5



With reference to Figure 5, explain why some tropical rainforest trees have buttress roots.

(4 marks)

18. Explain the causes of deforestation in tropical rainforests (6 marks)

19. Using a named example of a tropical rainforest you have studied, discuss the causes of deforestation. (6 marks)

20. Using a named example of a tropical rainforest you have studied, explain the environmental impacts of deforestation (6 marks)

21. Discuss the reasons why tropical rainforests are of value to people. (6 marks)

22. Outline why tropical rainforests are environmentally valuable. (2 marks)

23. Study Figure 6, an example of ecotourism

Figure 6

23. Explain why ecotourism is an effective way of sustainably managing tropical rainforests.

(6 marks)

24. Describe the process of selective logging to sustainably manage tropical rainforests (2 marks)

25. Explain the process of debt reduction in sustainable management of tropical rainforests

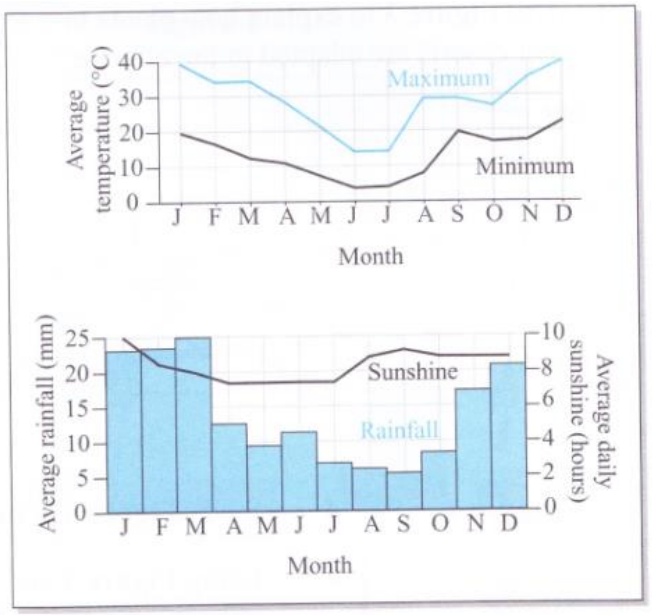
(4 marks)

S&C question:

27. Assess the extent to which sustainable management strategies protect the biodiversity of tropical rainforests. (9 marks)

28. Study Figure 1 showing the climate characteristics of a hot desert biome

Figure 1



With reference to Figure 1, describe two characteristics of the hot desert climate (2x2 marks)

Characteristic 1

_____

_____

_____

_____

Characteristic 2

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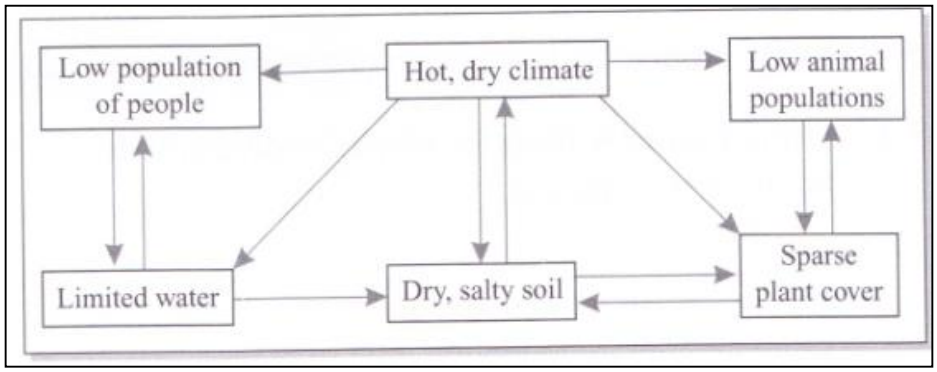
29. Study Figure 2 showing the interdependence in a of a hot desert biome

Figure 2



Using Figure 2, explain the interdependence between climate, soil in a hot desert biome (4 marks)

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30. Which of the following is a correct definition of hot desert annual precipitation? Choose one correct answer. (1 mark)

a) >250 mm ○
b) >25 mm ○
c) <250mm ○
d) <25mm ○

31. Complete the following paragraph to describe hot desert temperature changes: (3 marks)

Hot desert biomes are characterised by a large range between day and night temperatures. During the day, temperatures can reach up to _____ whereas at night, they can drop to _____. This is because the skies in a hot desert have no _____ so at night time, heat escapes rapidly causing a large drop in temperatures.

32. Study Figure 3 showing vegetation in a hot desert biome

Figure 3

With reference to Figure 3, explain **two** ways in which hot desert vegetation is adapted to the climate and soils by completing the table below. (4 marks)

Adaptation to hot desert climate	Adaptation to hot desert soils

33. Hot desert wildlife has to adapt to the physical conditions of the hot desert. Using examples you have studied, explain two adaptations. (2x2 marks)

Adaptation 1

_____

_____

_____

_____

Adaptation 2

_____

_____

_____

_____

34. Study Figure 4 showing hot desert biome wildlife

Figure 4



With reference to Figure 4 and your own knowledge, explain how hot desert wildlife is adapted to the conditions that characterise a hot desert biome. (6 marks)

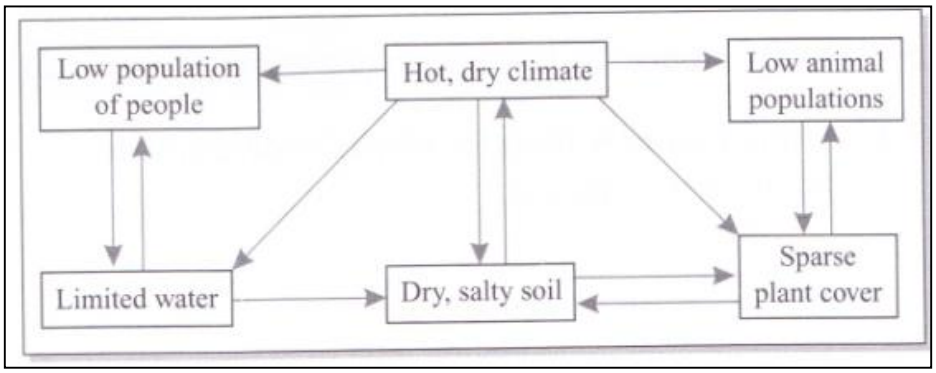
35. Study Figure 5 which shows a hot desert environment

Figure 5

36. With reference to Figure 5, explain how a hot desert environment can be easily damaged by human activity. (4 marks)

37. Study Figure 6 which shows interdependence in a a hot desert environment.

Figure 6



With reference to Figure 6, outline how human activity may affect a hot desert environment. (2 marks)

38. What does the term biodiversity mean? (1 mark)

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_____

39. With reference to Figure 6, outline how human activity can reduce biodiversity in a hot desert environment.

(2 marks)

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_____

40. Where would biodiversity be highest in a hot desert environment.? Choose one correct answer. (1 mark)

a) Closest to a town ⬭

b) At the edge of the desert ⬭

c) Around a source of water ⬭

d) Where it is coolest ⬭

41. Using a case study of a hot desert you have studied, outline how it has been developed in the following ways: (8 marks)

Mineral extraction _____

_____

_____

For energy production _____

_____

_____

For farming _____

_____

_____

With tourism _____

_____

_____

42. Outline how irrigation can reduce the quality of a hot desert environment. (2 marks)

43. 'Hot deserts have excellent potential for economic development'. Discuss this statement with reference to a case study. (9 marks)

45. The challenges posed by hot deserts mean that economic development is limited. With reference to a case study, to what extent do you agree? (9 marks)

44 . Assess the extent to which it is easy to overcome the challenges that developing economic activities in a hot desert creates. (9 marks)

45. Using specific examples, outline how the following can help to reduce the risk of desertification:

a) Tree planting (2 marks)

b) The use of appropriate technology (2 marks)

46. Discuss how population growth contributes to desertification in hot desert environments (6 marks)

47. Outline how the following activities can cause desertification in a hot desert environment

a) Overcultivation (2 marks)

b) Overgrazing (2 marks)

c) The collection of fuelwood (2 marks)