NAME:……

SCHOOL:……

WINCHESTER
COLLEGE

WINCHESTER ENTRANCE

GEOGRAPHY

MAY 1 2024

Time Allowed: 60 minutes

Total Marks: 55 marks

Additional Information:

Write in dark blue or black pen. Additional materials: Calculator, Ruler, Protractor, HB pencil.

You will have 10 minutes to read through the paper before you start writing.

SECTION A (UK and Global Location knowledge)

Candidates should answer all questions in this section.

SECTION B (Physical Thematic studies)

SECTION C (Human Thematic studies)

Candidates should answer one question from EITHER section B or C

SECTION D (Fieldwork skills)

Candidates should answer all questions in this section.

Write your answers in this booklet. If you need additional space, please use the additional pages at the back. You should show all your working so that credit may be given for partly correct answers.

Diagrams are not drawn to scale.

Do not be discouraged if you do not finish.

SECTION A: UK AND GLOBAL KNOWLEDGE
Answer ALL questions in this section.

Look at the map on page 3, which shows the globe viewed from directly above the North Pole.

1) The blue dots are capital cities. Give their names.

(a) ……

(b) ……

(c) ……

(d) …… (4)

2) Draw (approximately) and label the Prime Meridian on the map. (1)

3) Draw (approximately) and label the Arctic Circle on the map. (1)

4) Name the oceans indicated by the orange dots

(a) ……

(b) ……

(c) …… (3)

5) Would the following features be visible on this map? Circle the correct answer.

(a) Tropic of Cancer? (Yes / No)

(b) Equator? (Yes / No)

(c) Los Angeles? (Yes / No)

(d) Sao Paulo? (Yes / No)

(e) Papua New Guinea? (Yes / No) (5)

5) Name an **ocean** that cannot be seen on this map.

…… (1)

(Total = 15 Marks)

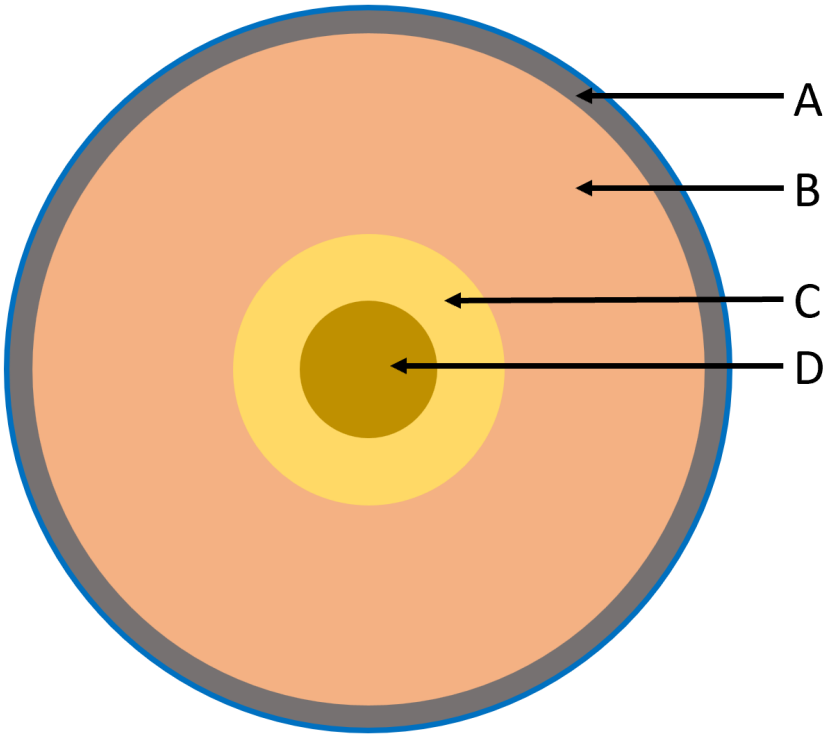
Fig 1 Map by FreeVectorMaps.com—under license

SECTION B

Answer <u>one</u> question from EITHER section B or C

<u>QUESTION 1:</u> TECTONIC PROCESSES

Fig. 2: A cross-section through the Earth.



a) Name the features A, B and C shown in Fig 2

A ……

B ……

C …… [3]

b) Outline <u>three</u> differences between continental and oceanic crust

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c) Explain why plates move around on the earth's surface.

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d) How, and why, would the impacts of an earthquake of the same magnitude likely differ in an LIC (Lower Income Country) compared to an HIC (Higher Income Country)?

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e) Explain, **primarily using diagrams**, why volcanoes only form at some plate boundaries, but earthquakes form at them all.

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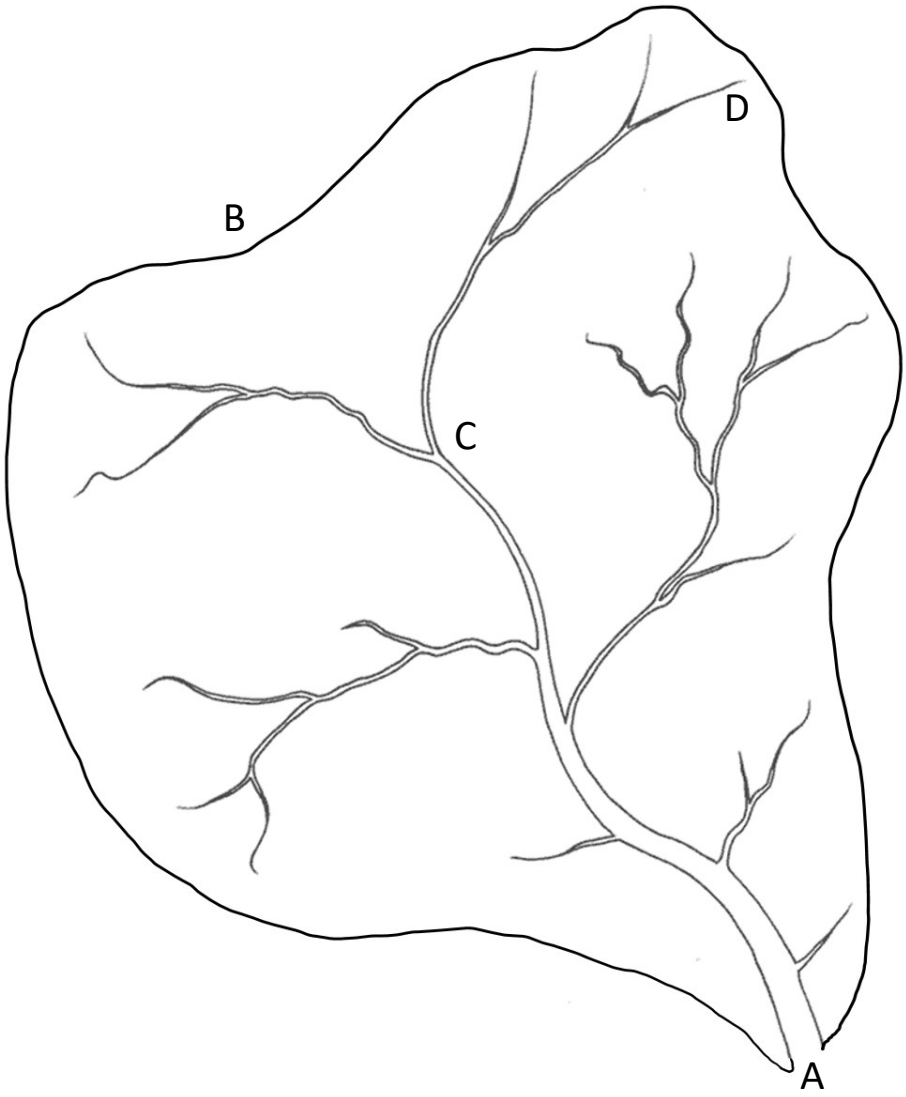
(Total = 20 marks)

QUESTION 2: RIVERS

Fig. 3: A river basin



a) Name the features at A, B, C and D shown in Fig 3

A ……

B ……

C ……

D …… [4]

b) What happens to the gradient (slope) of a river as it moves from source to mouth?

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……..…… [1]

c) Explain the processes of traction and saltation

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d) Where in a river (upper/middle/lower course) are you most like to encounter these features or processes. Circle the correct answer.

Interlocking spurs	(Upper / Middle / Lower)
Delta	(Upper / Middle / Lower)
Suspension	(Upper / Middle / Lower)
Waterfalls	(Upper / Middle / Lower) [4]

d) Explain, with diagrams, how a V-shaped valley is formed.

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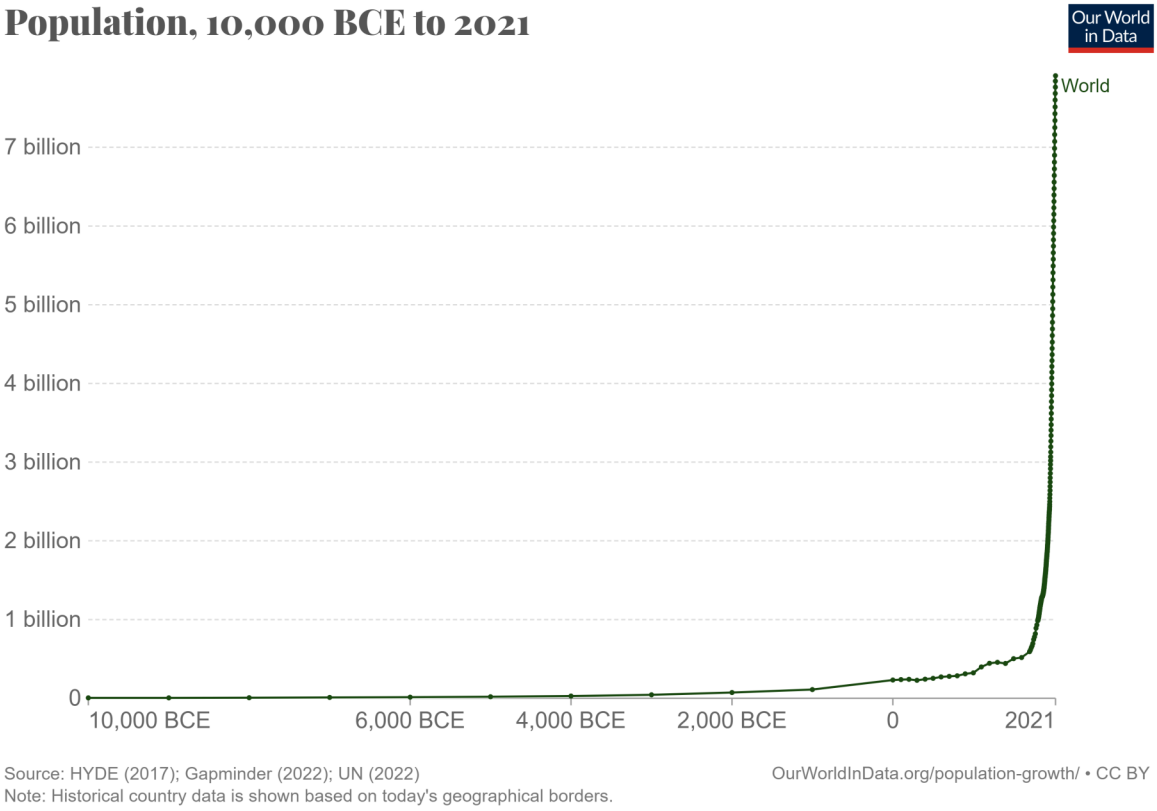
(Total = 20 marks)

SECTION C

Answer <u>one</u> question from EITHER section B or C.

<u>QUESTION 3:</u> POPULATION AND SETTLEMENT

Fig. 4: The total number of humans on the planet



Hannah Ritchie, Lucas Rodés-Guirao, Edouard Mathieu, Marcel Gerber, Esteban Ortiz-Ospina, Joe Hasell and Max Roser (2023) - "Population Growth". Published online at OurWorldInData.org. Retrieved from: 'https://ourworldindata.org/population-

a) How many people (approx.) were there on Earth in 2021?

..... [1]

b) Describe the graph in Fig. 4

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..... [3]

c) Give detailed reasons for the shape of the graph in Fig. 4. Within your answer, you should also use the terms **death rate** and/or **birth rate.**

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…… [5]

d) Many countries experiencing fast rates of population growth are also experiencing rural to urban migration. The statements below relate to this type of migration. Inside the brackets, circle what is being described in each case.

- People move from the countryside to the city due to job opportunities (Push factor / Pull factor)

- People migrate as they are attracted by the "bright lights" of the city (Push factor / Pull factor)

- The countryside has a lack of jobs for young people (Push factor / Pull factor)

- Climate change results in poor harvests (Push factor / Pull factor)

[4]

e) Describe how a city can expand in an environmentally sustainable way. Use a named example if possible.

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(Total = 20 marks)

<u>QUESTION 4:</u> ECONOMIC PROCESSES

Fig. 5**:** A factory that makes food products

Why are there lorries parked outside the front of the factory?

a) ……[1]

b) What features of Fig. 5 may suggest that the factory is situated in a good location?

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…… [3]

c) Suggest how the construction and running of factories such as that shown in Fig 5 may threaten the natural environment.

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…… [4]

d) For each of the people below, indicate which economic sector they work within:

(primary, secondary, tertiary or quaternary).

A farmer ……..……...…… [1]

An actor in film or TV……...……..……...…… [1]

Someone who makes the insides of computers parts...……...…… [1]

A fisherman……...……..……..……...…… [1]

A worker in a bottle factory ……..……...…… [1]

e) Using a named example you have studied, describe and explain the location of a factory or industrial zone

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(Total = 20 marks)

SECTION D: Fieldwork skills
Answer ALL questions in this section.

QUESTION 5

A group of pupils decided to do some fieldwork on their local river to investigate levels of pollution. After talking to their teacher, they decided to use the piece of kit below to study the Dissolved Oxygen Content (DOC) of the water, both upstream and downstream of a sewage works (wastewater treatment plant). The DOC meter works by displaying a number on the screen—the DOC— when the white tip is placed in the river.

You are <u>not</u> expected to have any previous knowledge of "dissolved oxygen content".

With help from their teacher, a group of pupils decided to test the following hypothesis: <u>Hypothesis 1: DOC will be lower downstream of the sewage works than upstream.</u>

Fig. 6 A Dissolved Oxygen Content (DOC) meter

a) In order to ensure the activity is <u>safe</u>, outline some things they should think about before they go to collect their data.

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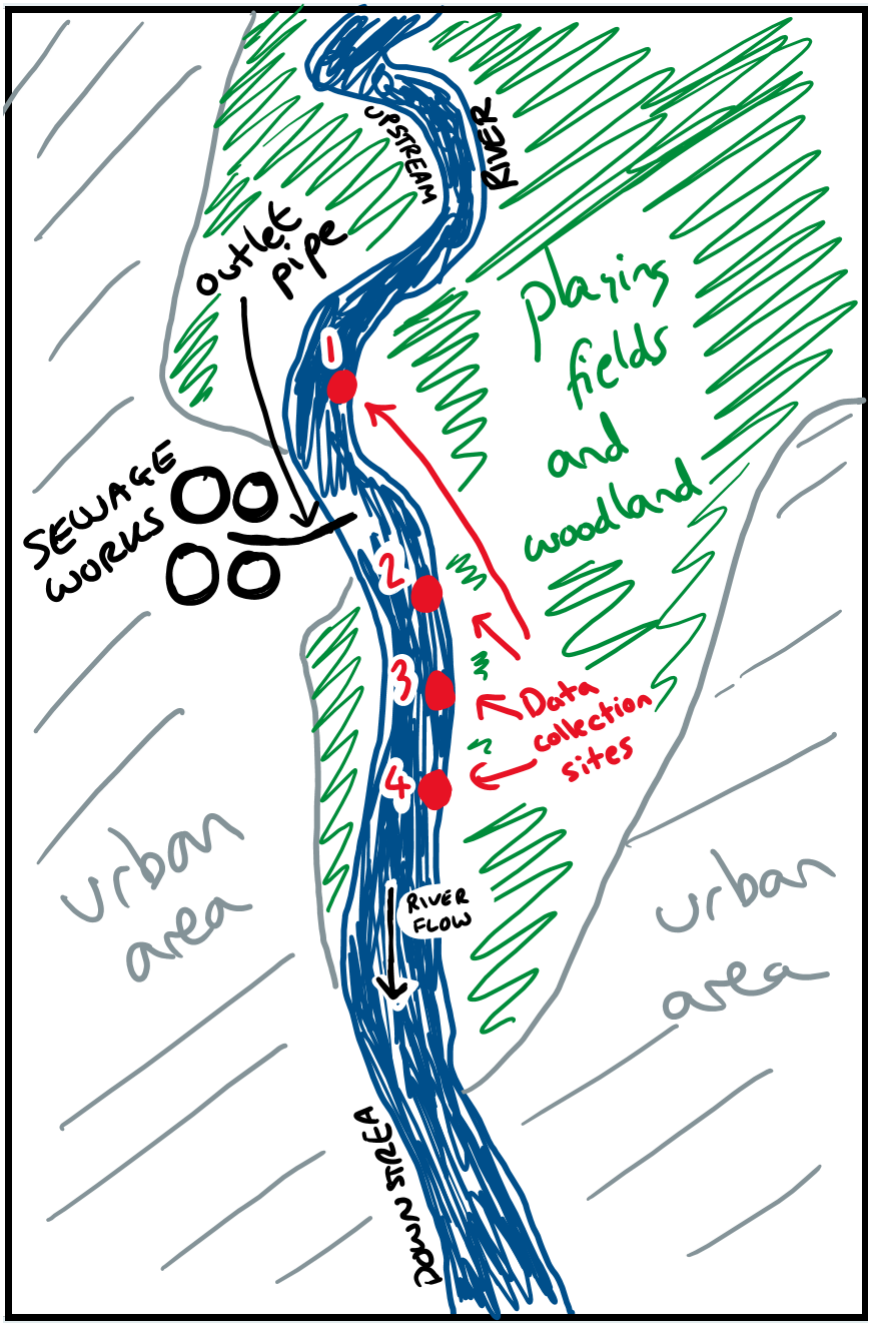
…… [4]



(b) The pupils produced the sketch map above to show where they collected data. Outline four ways this sketch map could be improved.

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……..…… [4]

Table 5 shows the pupils' results.

Site number	DOC (mg/L)
Site 1	7.4
Site 2	3.1
Site 3	5.8
Site 4	2.7

Table 5

c) Calculate the <u>mean</u> DOC from sites 2,3 and 4.

(2)

d) What conclusion did the pupils make for Hypothesis 1? Support your answer with data.

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……... [2]

e) Explain whether or not the conclusion they reached is <u>reliable.</u>

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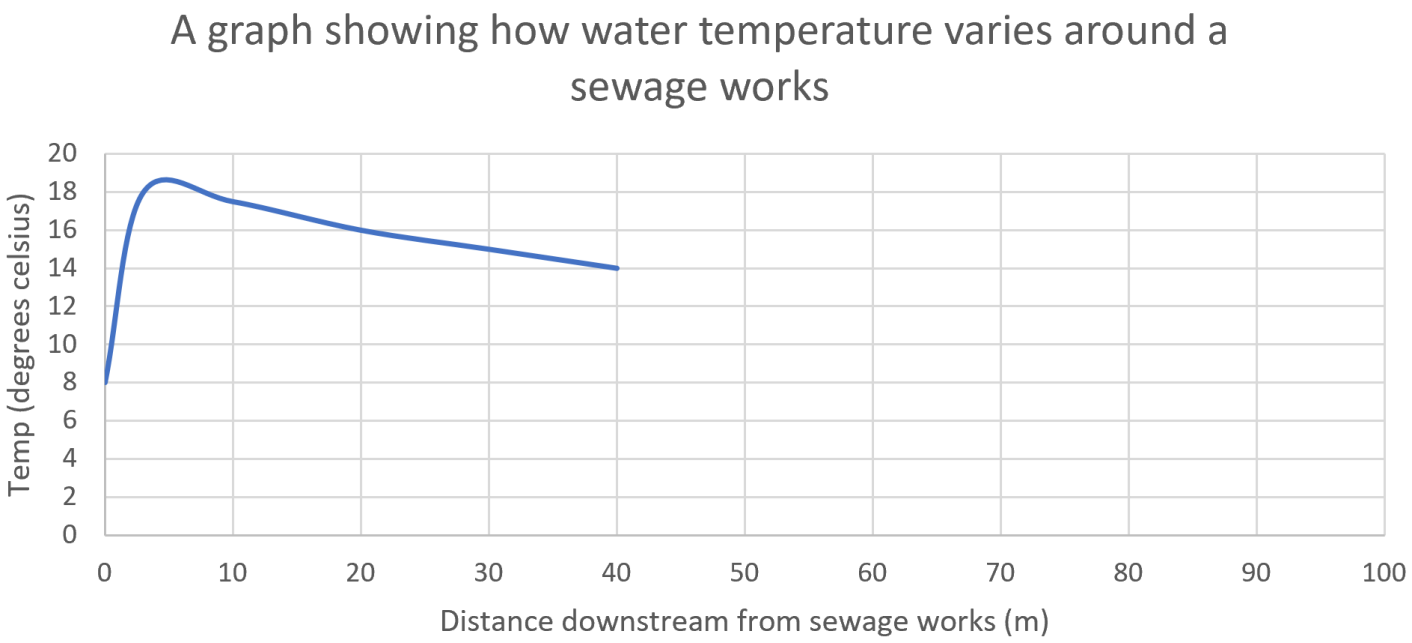
……... [4]

Another group of pupils also collected data from the same river, but with the advice of their teacher they instead looked at the temperature of the water downstream of the pipe coming from the sewage works.



f) Is the water coming out of the sewage pipe warm or cold? How do you know?

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…… (2)

g) Draw on the graph above the line the pupils might expect to see if they had continued collecting data to 100m away from the sewage works. (2)

(Total = 20 marks)

ADDITIONAL PAGES

ADDITIONAL PAGES