National Qualifications 2025

X833/77/11 Geography

TUESDAY, 29 APRIL
1:00 PM – 3:30 PM

Total marks — 50

Attempt ALL questions.

Marks will be given for appropriately labelled sketch-maps and diagrams.

You must use the supplementary items and tracing overlays provided for annotation or as a base for diagrams. These resources should be placed inside the front cover of your answer booklet.

You should use the atlas provided.

Write your answers clearly in the answer booklet provided. In the answer booklet you must clearly identify the question number you are attempting.

Use **blue** or **black** ink. You may use pencil for the completion of Supplementary item B — tracing overlay.

Before leaving the examination room you must give your answer booklet to the Invigilator; if you do not, you may lose all the marks for this paper.

X8337711

MARKS

Total marks — 50 marks

Attempt ALL questions

Question 1 — Map interpretation

To answer this question you will need to use:

- Supplementary item A — Ordnance Survey (OS) Map Extract Grafham Water
- Supplementary item B — tracing overlay
- Supplementary item C
- the atlas provided.

You should make detailed use of the whole map extract as well as using your atlas appropriately. You should also carefully read the information in the text boxes.

A bike race is being planned as part of an aquabike event. An aquabike event starts with a swim race and finishes with a bike race. The event will take place in the Grafham Water area and over 200 athletes are expected to take part. Since the swim race can take place anywhere in Grafham Water, the bike race is being planned first.

The route for the bike race should be between 17 km and 20 km and needs to have both on-road and off-road sections. It must start near Grafham Water so that athletes can get to their bikes quickly after the swim race. Space will be required to store the bikes at the start of the bike race.

The event will need to have space for car parking and there will need to be access to toilets and food for athletes and spectators.

(a) (i) On the tracing overlay (Supplementary item B) **draw** accurately a proposed route for the bike race. Your route should be between 17 and 20 km long. The start **and** finish points should be clearly marked. **4**

(ii) **Discuss**, in detail, the reasons for your choice of route. You may wish to annotate your tracing overlay to support your answer. **8**

(iii) **Explain** the **positive** socio-economic impacts that the event may have on the area. **4**

Grafham Water dam and reservoir were completed in 1965 to supply drinking water to the new town of Milton Keynes. Farmers were forced to sell land to make way for the reservoir, and 10 km^2 of land were flooded.

(b) Study Diagram 1 (Supplementary item C).

Suggest the **negative** economic **and** environmental consequences the construction of this dam and reservoir may have had on the local area. **4**

MARKS

Question 2 — Gathering and processing techniques

To answer this question you will need to use:

- Supplementary item A — Ordnance Survey (OS) Map Extract Grafham Water.

A group of geography students want to measure the discharge of River Kym (145644) by gathering data on its width, depth and velocity.

(a) (i) **Describe** in detail how the students could gather the data they want.

(ii) **Discuss** how the students could ensure that the data is reliable. **8**

(b) Suggest how any health and safety issues for the students involved in collecting this data could be minimised. **2**

[Turn over

MARKS

Question 3 — Geographical data handling

To answer this question you will need to use:

- Supplementary item D
- the atlas provided.

Noise pollution is a growing problem and can have a serious long-term impact on health and wellbeing. Noise Pollution Officers from the local council are producing a noise map as part of their Noise Action Plan.

They have gathered data on noise levels, number of vehicles and number of pedestrians along a transect from the CBD to the suburbs.

(a) Study Diagrams 1 and 2 (Supplementary item D).

(i) Diagram 1 is the transect through a city from the CBD to the suburbs**.** **Evaluate** the effectiveness of using a transect to gather this data. **4**

(ii) Referring to the information shown in **both** Diagrams 1 and 2, **suggest** possible reasons for the changes in the noise levels along the transect. **8**

The local council is very concerned about how levels of noise may be affecting people. They wish to investigate the relationship between noise levels and distance from the CBD. They have applied a Spearman's Rank Correlation Coefficient.

(b) Study Diagram 3 (Supplementary item D).

(i) **State** a null hypothesis for such an investigation. **1**

(ii) **Evaluate** the result in terms of the null hypothesis. **3**

(iii) **Explain** the suitability of using Spearman's Rank Correlation Coefficient for measuring this relationship. **4**

[END OF QUESTION PAPER]